ProgrammeOutcomes (Pos) Course Outcomes (Cos)

Sr. No	Programmes
1	**Bachelor of Arts (B.A)**
2	**Bachelor of Arts in Social studies (B.A)**
3	**Bachelor of Science (B.Sc)**
4	**B.Com Bachelor Of Commerce**
5	**B.Voc Bachelor Of Vocation**
6	**Master of Arts(M.A.)**
7	**Master of Commerce(M.Com)**
8	**M.Sc Information Technology**
9	**M.Sc Computer Science**
10	**Post Graduate Diploma in Computer Application**
11	**Post Graduate Diploma in Garment Construction and Fashion Designing**
12	**Diploma in Computer Application**
13	**Diploma in library Science**
14	**Diploma in Stitching and Tailoring**

Sr. No	Courses
1	**Subject: English**
2	**Subject: Hindi**
3	**Subject: Punjabi**
4	**Subject: Sanskrit**
5	**Subject: Music**
6	**Subject: Education**
7	**Sociology**
8	**Subject: History**
9	**Subject: Physical Education**
10	**Subject: Economics**
11	**Subject: Psychology**
12	**Subject: Political Science**
13	**Subject: Mathematics**
14	**Subject: Home Science**
15	**Subject: Fine Arts**
16	**Department of Commerce and Management**
17	**Department of Computer science**
18	**Department of Physics**
19	**Department of Chemistry**
20	**Department of Zoology**
21	**Department of Botany**
22	**Department of Fashion Designing**
23	**B.A. Social Studies**
24	**B.Voc in Financial Market and Services**
25	**B.Voc in Fashion Technology and Aparel Designing**
26	**B.Voc in E-Commerce and Digital Marketing**
27	**B.Voc in Software Development**
28	**Diploma in Library Science**
29	**Diploma in Stitching and Tailoring**
30	**Diploma in Cosmetology**

Programme Outcomes

B.A. (Bachelor of Arts)

PO1EffectiveCommunication: Theprogrammemakesthe students familiarwithusageoflanguagein for-malandinformalexpressionsoflife.

PO2EffectiveCitizenship:Thestudentsgetknowledgeinfieldsofsocialsciences,performingarts, and
Literature and becomeresponsible citizens ofthesociety.

PO3SocialInteraction: Thestudentsareacquaintedwiththesocial,political,economic,historicalandpsycho-logical facades pertainingtodifferentsituations.

PO4 Self directed Learning: The programme gives liberty to the students to choose their area of in-terestout of theoptions availableand selectthepost-graduateprogrammeaccordingly.

B.A.(Bachelor of Social studies)

PO1Critical thinking and problem-solving skills: The program hones students' ability to think criti-cally, evaluate evidence, and solve problems effectively. Graduates will be able to approach complex social issues from multiple perspectives and propose well-reasoned solutions.

PO2Effective communication skills: The program emphasizes the importance of clear and concise communication, both written and oral. Graduates will be able to effectively communicate their ideas to diverse audiences.

PO3Research skills: Students will develop strong research skills, including the ability to identify rele-vant sources, gather and analyze data, and draw sound conclusions.

PO4Global and multicultural awareness: The program fosters an appreciation for global diversity and intercultural understanding. Graduates will be able to think critically about social issues in a global con-text.

PO5Lifelong learning: The program cultivates a love of learning and the ability to learn independently. Graduates will be well-prepared for lifelong learning in a rapidly changing world.

B.Sc. (Bachelor of Science)

PO1 Critical Thinking: The programme aims togiveknowledge with facts and figures related tovarious subjects in puresciencessuchasPhysics,Chemistry,Botany,Zoology,Mathematics,
Computer Science, Economics, QuantitativeTechniques,Bio-informatics, Bio-technologyetc.

PO2 Lifelong learning: Students understand the basic concepts, fundamental principles,and the scientific theories related to various scientific phenomena and their relevance in the day-to-daylife.

PO3 Logical experimentation: The learners acquire the abilities in handling scientific instru-ments,schedulingandexecutingtheexperimentsinlaboratoriesandtodrawlog-icalinferencesfromthescientificexperiments.

PO4 Creative thinking:They become capable of thinking creatively, to propose innovative ideas in-clarifyingfactsandfiguresandprovidingnewsolutionto the problems.

PO5 Interdisciplinary approach: To give them knowledge about developments in any science subject and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments.

PO6 Scientific aptitude: The programme targets to develop scientific aptitude among the students to make them open-minded, critical and curious in order to deal with all aspects related to life.

B.Com. (Bachelor of Commerce)

PO1 Comprehensive Financial aspects: To enable the students to have comprehensive knowledge of finance, accounting, taxation and business laws.

PO2 Entrepreneurship: To equip the students with professional, interpersonal, presentation and entrepreneurial skills.

PO3 Analytical Thinking: To enhance the analytical and decision making skills of the students which can help them to prepare for various competitive exams.

PO4 Modern tool usage: To develop the accounting skill among the students in the computerized environment.

PO5 Leadership: Exercising professional skills, values, team spirit, and high leadership and to accept the challenges in the industry and academics.

B.B.A. (Bachelor of Business Administration)

PO1 Business acumen: Apply knowledge of management theories and practices to solve business problems with the help of analytical and critical thinking abilities.

PO2 Taxation system: To have thorough understanding of business and income tax laws in the dynamic business environment.

PO3 Entreprenership: To inculcate entrepreneurial skills among the students.

PO4 Accouting skills: Developing accounting skills in the computerized environment

PO5 Managerial skills: Ability to understand the different areas of management such as marketing management, human resource management, production operations management.

B.Voc. (Bachelor of Vocation)

PO1 Industry-Academia gap bridging: Students will be able to practically understand and apply the knowledge related to the requirements of industry.

PO2 Professional competency: To provide a judicious mix of professional skills and suitable general education component.

PO3 Academic flexibility: To provide flexibility to the students to serve the industry by having exit points at different levels.

PO4 National Employability: To provide an opportunity to the students to get on the job training

whichhelpthemto enhance theirprofessionalskills.

PO5 Vertical mobility: To integrate NSQF within the undergraduate level of higher education in order to enhance employabilityofthegraduatesandmeetindustry requirements.Suchgraduatesapartfrommeeting the needs of local and national industry are also expected to be equipped to become part of theglobal-workforce.Toprovideverticalmobilitytostudentscomingout of10+2withvocational subjects.

PO6   Effectivecitizenship:Theprogrammelaysthefoundationtobecomearesponsiblecit-izenandmeaningfullycontribute tosociety.

M.A. (Master of Arts)

PO1 General Proficiency: The Masters of Arts programme provides the candidates with understanding, general proficiency, and methodical abilities on an advanced level required in industry, consultancy, education,orpublicadministration.

PO2 Research aptitude: The students will acquire knowledge and understanding in their specific field ofstudyaswellasintocurrentresearchanddevelopmentwork.

PO3Complexproblemhandling: Theywillbeabletodemonstratetheabilitytoidentifyissuescriticallyandto planthe assigned tasksaccordingly.

PO4 Life long learning: The programme provides in-depth knowledge of particular subject and arous-esinterest of the students towardsresearchinthatparticularfield.

PO5Socialinteraction: Theprogramme(includingEnglish,Punjabi,HindiandPoliticalScience)com-binestheoreticalteachingwithlogicaltoolsandtheories,throughgroupwork,seminarsandworkshops.   This includes exercises in which participants co-develop and verify practical solutions to real-worldissues.

M.Com. (Master of Commerce)

PO1Comprehensiveaccounting:Toenablethestudentstohavecomprehensiveknowledgeofcontemporary issues in accounting, international accounting, international financial, management, retailmanage-ment,bankingand insurance,taxplanning, business environment.

PO2 Capital marketing: To enable the students to have understanding of the basic concepts in capi-talmarket,differentinvestment alternativesandto dosecurityanalysisandportfoliomanagement.

PO3 Analytical thinking: Enhance the analytical skills of the students and substantiate the deci-sionmakingprocessthrough modeling and data analysis in the field of research.

PO4Careerprogression: ToenablethestudentstoprepareforcompetitiveexamssuchasUGC.

M.Sc Information Technology
PO1 Modern tool usage: This programme inculcates the basic understanding of Computer and Com-puterProgrammingLanguages in students so that they can have complete knowledge about the system and itsinnerworkingdetails.

PO2 Computer Knowledge: This programme aware the students about the high use of Computers invariousfieldsandincreasingnumberofJobsinthisfield.

PO3Designand development of solutions: This Programme enables the students to have the completeunderstanding of various branches of Computer and Technology such as Computer Graphics, OperatingSystemsand Data Structures,

PO4 Problem solving and analysis: This programme will inculcate the ability of identify, analyze andsynthesizescholarlyliterature relatingtothefield of computer science andIT.

PO5 Design of Solutions: The effectiveness of this programme is to ensure that the students understandtheuseofsoftwaredevelopmenttools,IDEs, varioussoftwaresystemandmoderncomputtingplatforms.

M.Sc Computer Science

PO1: Technology-orientation: Be technology-oriented with the knowledge and ability to develop creative solutions, and better understand the effects of future developments of computer systems and technology on people and society.

PO2: Get some **development experience** within a specific field of Computer Science, through project work.

PO3: **Application of knowledge:**Get ability to apply knowledge of Computer Science to the real-world issues.

PO4: Be familiar with **current research** within various fields of Computer Science.

PO5: Use creativity, **critical thinking, analysis** and research skill

Post Graduate Diploma in Computer Application

PO1: It will equip the students with skills required for designing, developing applications in Information Technology.

PO2: Students will able to learn the latest trends in various subjects of computers & information technology.

PO3: The PG Diploma is aimed at graduates with a computing background and provides a detailed coverage of the key concepts and challenges in data and resource protection and computer software security.

Post Graduate Diploma in Garment Construction and Fashion Designing

PO1: Engage with the variety of drawing techniques and processes for design and illustration**.**

PO2: Support creative ideas with appropriate technical information.

PO3: Create a collection, referencing current trends and influences relevant to the target market.

PO4: Articulate design ideas verbally, visually and digitally

PO5: Develop systematic, critical approach to problem solving at all levels of the design process

DCA (Diploma in Computer Applications)

PO1Introductory knowledge ofcomputer:Thisprogrammeenablesthestudentstohaveanintroductory

level of knowledge in computer field so that they can pursue higher studies after highersecondaryclasses.

PO2: Application software understanding: This one yearprogramme will provide the basic insights ofvariousapplication software whichare beingusedinvariousfields,officesand companies.

PO3 Hardware and software knowledge: This programme enables the students to understand the basicworking of computer systems andlearn the basic concepts of system so that they can have basic generaknowledgeofsystem.

PO4Job orientedoutput: Thisprogramme providesbeneficial outcomesto the students for preparingfor-competitive examsandgrabsajobin educational and governmental institutions.

Diploma In Library Science

PO1: Domain knowledge: Students will attain knowledge and applications in the field of Library and Information Science.

PO2: Problem Analysis: Ability to design or develop the model for students to deal with day-to-day activities, sequencing, arrangement of books etc.

PO3: Effective Communication: Speak, read, write and listen clearly in person and through electronic media in Hindi and English, and make meaning of the world by connecting people, ideas, books, media and technology.

PO4: Social Interaction: Student can now interact and educate the society and its people by emphasizing the need of books and knowledge to become responsible citizen.

PO5: Ethics: Student can now ethically apply the knowledge gained from books and other means.

PO6: Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

Diploma in Stitching and Tailoring

PO1: The Student will be able to understand the Fashion designing concepts.

PO2: Students will able to gain the knowledge about Sewing Machine and sewing machine parts, Drafting,sketching and painting / printing techniques.

Course Outcomes
Department of English

B.A. (Bachelor of Arts)/ B.Sc. Medical/ Non-Medical/ Computer Science/B.Com/ BBA

Semester–I

Paper: English(Compulsory)

CO 1: Students would be able to comprehend the literary aspects of the language

CO 2: Learning or studying grammar would guide them to focus on syntactic & semantic parts ofthe language.

CO 3: It would help them to deal with the globalization through a common language.

CO 4: The stories in the coursework provide students psychological & social growth through the Details of different cultures & society i.e. their traditions, rituals, beliefs etc.

CO 5: Students' writing skills and reading skills would be enhanced.

Semester-II

Paper: English(Compulsory)

CO 1: Students would be able to comprehend the literary aspects of the language.

CO 2: Learning or studying grammar would guide them to focus on syntactic & semantic parts of the language.

CO 3: It would help them to deal with the globalization through a common language.

CO 4: The stories in the coursework provide students psychological & social growth through the details of different cultures & society i.e. their traditions, rituals, beliefs etc.

CO 5: Students' writing skills and reading skills would be enhanced.

Semester-III

Paper: English(Compulsory)

CO 1: Gaining knowledge of the technical aspects of the language.

CO 2: Thinking ability gets enhanced through while dealing with themes of Poetry.

CO 3: They would be able to understand the significance of Literature and Grammar.

CO 4: Enhancing awareness of Community, culture and Language.

Semester-IV

Paper: English(Compulsory)

CO1:Gainingknowledgeofthetechnical aspectsofthelanguage.

CO2:Thinking ability gets enhanced through while dealing with themes of Poetry.

CO3:They would be able to understand the significance of Literature andGrammar.

CO4:Enhancingawarenessof Community, cultureand Language.

Semester-V

Paper: English(Compulsory)

CO1:BringsanawarenessofAmericanSocietyandstudentsgettoknowabout materialistic thinkingof American merchants.

CO2:ConceptofAmerican dreamis introduced tostudents.

CO3:Throughpoemsstudentsget toknowaboutdifferenttrendsinPoetryofdifferenterasinEnglishliterature.

CO4:Letters,Application,Report,ResumeWritingishelpfulforstudentsintheirformalinteractionwith others.

Semester-VI   9

Paper:English(**Compulsory**)

CO1:Thetextpromotesethicalvalues.

CO2: The students get acquainted with the Indian novel and an anthology of dramas.

CO3:Improvementinwritingskillsalongwithbroadeningtheirsocial andpsychological horizon.

English in B.A. Social Studies

Semester-I&Semester-II

Paper:English(**Compulsory**)

CO1:Studentswouldbeabletocomprehendtheliteraryaspectsofthelanguage.

CO2:Learningorstudyinggrammarwouldguidethemtofocusonsyntactic&semanticpartsofthelanguage.

CO3:Itwouldhelpthemtodealwiththeglobalizationthroughacommonlanguage.

CO4:Thestories in the courseworkprovidestudentspsychological&socialgrowththroughthedetailsofdif-ferentcultures&societyi.e.theirtraditions,rituals,beliefs etc.

CO5: Students' writingskillsandreadingskillswouldbeenhanced.

B.A.

Semester–IPaper: English (Elective)

CO 1: The course introduces the students to the world of literature through various Collections of poems and a novel and acquaints the students with different points of views through an extensive reading of the texts prescribed in the syllabus.

CO 3: The composition and vocabulary section includes official letter writing and usage of words/phrases in sentences which enhances students' ability to write analytically and precisely.

CO 4: Learning literary terms permit the students to achieve a deeper understanding of the characters, themes and trends. Thus enabling students to assess develop and improve the writing process.

Semester-IIPaper: (English)

CO 1: The prescribed play and novel enable thestudents to understand various aspects of society through the lens of literature while simultaneously helping them build their verbal and nonverbal skills through introduction with plethora of words.

CO 2: Various literary terms help students to establish and examine relationships between literature, literary terms and different genres.

CO 3: Phonetics helps in better pronunciation.

Semester-IIIPaper: (English)

CO 1: The prescribed collection of poems and play enable thestudents to understand various aspects of society through the lens of literature while simultaneously helping them build their verbal and non ver-balskills through introduction with plethora of words.

CO 2: Familiarization with the current issues of the society.

CO 2: Developing critical and analytical ability of the learners.

CO 3: Imbibing the creative world of the writers from all over the world.

Semester-IV Paper: (English)

CO 1: The prescribed collection of essays and short stories enable the students to understand various aspects of society through the lens of literature while simultaneously helping them build their verbal and non verbal skills through introduction with plethora of words.

CO2: Familiarization with the current issues of the society.

CO 3: Developing critical and analytical ability of the learners.

CO 4: Imbibing the creative world of the writers from all over the world.

Semester-V Paper:English (Elective) Modern English Drama

Understanding the background of the English Literature and thus appreciating the evolving of the English drama, poetry and novel.

CO 2: Learning the art of the critical reading of English drama.

CO 3: Appreciating the cultural differences as well the universality of humanity in the literature.

Semester- VI Paper: Elective (Elective) Modern English Novel

CO 1: Understanding the modern critical movements and their impact on English literature.

CO 2: Reading the novel with a focus on the cultural depiction.

CO 3: Getting to know the historical implications of the Second World War on the state of Bengal.

English in   B.Voc.BCA/ B.Sc. (IT)/ B.Sc FD/B.Sc. Bio-Technology
Semester-I
Paper:CommunicationSkills inEnglish

CO1:The students get to know the relevance and importance of proper communication.

CO2:They learnaboutthe various aspectsofcommunication.

CO3:There adding andwritingskills ofthestudentsget improvised.

CO4:Theirwritingskillsgetenhancedastheylearnhowtoframeofficiallet-

ters,applications,officememorandum, notices etc.

Semester-II
Paper:CommunicationSkillsinEnglish

CO1:Improvesthe listeningandspeakingskillsoftheyounglearners.

CO2:Sharpens theircommunication proficiency astheygainpracticalknowledgeabouthowtodealandinter-actwithothers.

CO3:Raisestheirconfidencelevel.

English: M.Sc. (Fashion Designing)
Semester-I&Semester-IV

Paper:CommunicationSkillsinEnglish

CO1:Enhances students'ability to be an effective speaker, listener, reader as well as writer.

CO2:Develops expertisein the English language.

CO3:Enhancesknowledgeofgrammar andEnglishlanguageingeneral.

CO4:Getsopportunitytoparticipateindebates,Elocutionandotherco-curricularactivitiesin variousuniversi-ties.

CO5:Studentslearntointeract.

Name of Programme: M.A.
Semester-I
Paper-I:Poetry-IRenaissancetoRomantic
CO1:ToacquaintthestudentswiththemostsignificantEnglishpoetsandtheirpoetry.

CO2: ToacquaintstudentswithmajortrendsinEnglish literaturefromthetimesofRenaissancetoRomanticismthrough a detailed studyof poetryof thattime.

CO3:Enablestudentstotracetheevolutionofvariouspoeticforms.

CO4:Totrainthestudents in the closereadingofpoems in the contextsofliteraryconvention

Paper-II:RenaissanceDrama
CO1:Students will get familiarized with the Renaissance Age, its significance and its impact on theliterarytrendsoftheage.

CO2:StudentswillunderstandandappreciatetheevolvingoftheEnglish-Dramafromreligiousdomaintothecreativehumandomaini.e.shift fromTheo-centrictohomocentricapproach.

CO3:Therewillbeinculcatedanunderstandingoftheuniversalityandtimelessness ofhumanaspirationsand efforts.

CO4:Students will learnor readdramainthelightofthe psychological theorieslikeOedipuscomplex.

CO5:Studentswill gettoknowthetheoryofHumorsprevalentin theancient Ages.

Paper-III:EnglishNovel(upto 19ᵗʰCentury)
CO1:Studentswillunderstand theImpact ofindustrializationstronglyfeltin'Hard Times'byDickens.

CO2:Theywill studyofemergenceofwomenwritersandunderstandtheirstandpoint on the placeofwomen in society.

CO3:InculcatingacomprehensionoftheconceptofRealismasused in the Victorianerainthestudents.

Paper-IV:Phonetics andSpoken English
CO1:Tointroducestudentswiththeworld English-es(i.e.varietiesofEnglish)atthephonologicallevel.

CO2:Making students Understand the standard version of spoken English

CO3:Introducingstudents with all the44 sounds(i.e.phonemes)of English.

CO4:Makingstudentsunderstanddifferent featuresofconnectedEnglishspeech.

Paper-V:WesternLiteraryHistory–I
CO1:Studentswillbeabletoanalyseliterarytextsinlightoftheirhistorical andintellectualbackground.

CO2:Studentswillbecomefamiliarwithimportantliteraryfiguresandcanonicalworksofhistoricalperiodi.e. studied.

Semester-IIPaper-VI:Poetry-II(Victorian&Modern)
CO1:Tofamiliarize studentswithEnglishPoetrystartingfromVictorianageandmovingtowardsthemodern period.

CO2:Enablestudentstotracetheevolutionofvariouspoeticforms

CO4:Totrainthestudents in the closereadingofpoems in the contextsofliteraryconventionandhistory.

Paper-VII:ModernDrama

CO1:Comprehension of Christianity as an orthodox and fanatic religion in the Past.

CO2:GainingknowledgeaboutFrenchKingdomanditssociety.

CO3:Understandingthepostmodern concept of meaninglessnessofhumanexistenceconveyedthroughBecket-tandPinter's works.

CO4:GettingacquaintedwithEliot'splatonicviewofspiritualsalvationandregeneration.

CO5:Sensitization towardsman'salienation from thesociety thereby depicting growing concernsforthe institution offamily.

Paper-VIIIModernNovel

CO1:AnunderstandingofthemodernismandthetechniqueslikeStreamofCon-sciousnessasanovelliterarytechnique.

CO2:Comparingthechronologicalorderinfiction-writingadoptedin19thcenturywith20thCenturyfocus on psychologicalimpactofthe 'moment'.

Paper-IX:EnglishGrammarandWriting

CO1:Toprovideanunderstandingofthepractical,functional,andexperimentalnatureofmoderngrammar.

CO2:Understandingofthesmallestmeaningful unitsandhowtheyformwordsinEnglish.

CO3:Comparinggrammaticalformand itsfunctionindifferentenvironments.

CO4:Comparingtime,tense,aspect,andmood inEnglish.

Paper-X:WesternLiteraryHistory–II

CO1:ThecoursecoverstheperiodfromWorldWarItothepresentagebywhichthestudentsbecomeacquainted withthe transitionsinsocietywithtime.

CO2:Literatureisuniversalandsothesyllabusunfoldsthelayersofliterature form allthespheresofworld i.e. British,American, Continental.

CO3: The learner imbibes the scenario and structure of a particular society and is able to relateliterature withits respective era.

CO4:Thestudents'understandthehistoricalstanceofeachgenre.

Semester-III

Paper-XI:IrishLiterature

CO1:Analysing,SynthesisingandIntegratingknowledgeandpracticecreativethinkingandexpression.

CO2:Getting acquainted with concepts and information related to Irish History and Culture clearly.

CO3:Understandingofmythologicalandliteraryconcepts.

Paper-XII:GeneralLinguistics

CO1:Understandingofsemioticsandthe wayvarioussignsandsymbols conveymeaning.

CO2:ThestudyofsynchronicstructurallinguisticsofSaussureand Bloomfield.

Paper-XIII:LiteraryCriticism

CO1:To introduce thevariousaspectsofliterarycriticismforproperunderstandingandappreciationof literature.

CO2:Toacquaint studentswithsomeofthefundamental questionsinliterature.

CO3:This course aims at helping the students to develop critical insight into literary productions.

CO4:Tointroduceliteraryandcriticaltheoryasreadingtools for students.

Paper-XIV:IndianWritinginEnglish

CO1:Acquaintingstudentswiththe20thcenturyIndianwriterswritinginEnglish.

CO2:Developing a strong understanding of Indian-ness contrasted with western culture.

CO3:Understandingtheconceptofdominationof male in society--a patriarchalsetup.

CO4:GettingstudentsacquaintedwithKamalaDascreativitywithitsautobiographicalstrain,andhervoiceagainstthesexual exploitation facedbywomen in oursociety.

CO5:Understandingtheclassdifferencesandtheexploitationofthelowercastes.

Paper-XV:CommunicationStudies

CO1:   Understandingthenatureoflanguageof cinema.

CO2:   Getting acquainted with the visual mode of story-telling.

CO3:   Imbibingpotentialforcrossculturecommunication.

CO4:   Gainingknowledgeofthemediumandmodelsofcommunication.

CO5:   Improvinginterpersonalskillsofthestakeholders.

Semester-IV

Paper-XVI:ModernLiteraryTheory

CO1:   Introductionofstudentstotheorieslike-feminism,structuralism,orientalismetc.

CO2:   Familiarizationwithknowledgeareasandanalyticaltools.

CO3:   LearningtoDe –constructthetexttofindoutnewmeanings.

CO4:   Usingideasfromtextinreadingand writing.

Paper-XVII:AmericanLiterature

CO1:Studentswillperceivetheevolvingofagreatnation-AmericafromaPuritan narrow foundation.

CO2:Learning to trace the belief and faith in humanity which is the true foundation of Democracy.

CO3:Envisioningtheuniversalphilosophicalvisionaboutlife,work, and humanity in the poetryofFrost.

CO4:Psychologicalstudyofthe concept tofracialprejudices,collectiveunconsciousandunderstandingtherelevance ofhumandignityinlife.

Paper-XVIII:Post-ColonialLiterature

CO1:   Tofamiliarizethestudentswiththeoreticalconceptsrelatedtotheliteraturesof the new world-Caribbean, Asian, Canadian, and Nigerian-which have longremained ignored.

CO2:   Toforegroundissuessuchashistory,class,race,gender,nation,culture,marginality,diasporaconsciousness.

Paper-XIX:ProseandShort Stories

CO1:   UnderstandingtheoriginanddevelopmentofEnglishessay.

CO2:   Understandingaliterarytextindifferentcontexts.

CO3:   Imbibingknowledgeofsociopoliticalandeconomicconditionsofthesociety.

CO4:   Developinganabilitytowritecriticallyandcreatively.

Paper- Paper-XX: World Classics in Traslation (Option-1)

CO1: Acquainting with the classics of different nations.

CO3: Understanding of theories like Nihilism, Absurdism, Existentialism.

CO2: Analysing,SynthesisingandIntegratingknowledgeandpracticecreativethinkingandexpression.

Department of Hindi

Hindi in B.A. (BachelorofArts)

Semester-I

Paper:AadhunikKavita,VayakarantathaAnuvaad

CO1:   Students will learn about the uses of translation.

CO2:   Studentswilllearnabout Hindi grammar.

CO3:   The students are provided with the knowledge of Hindi literature.

CO4:   Theywill get knowledgeaboutHindiasanofficial language.

Semester-II

Paper:GadhyeSahitye,Sadhantki,VayakarantathaPatrakarita

CO1:   Students will earnaboutmediawritingskill.

CO2:   Students will get knowledge about contemporary literature.

CO3:   They will be provided with the knowledge about vocabulary.

CO4:   Theywillunderstandaboutproseliterature.

Semester-III

Paper:MadhyayogeenKavye, Itihas,VayakarantathaKavayang

CO1:   StudentslearnandunderstandabouthistoryofHindi literature.

CO2:   The students are provided with the knowledge about medieval Hindi poetry and poets.

CO3:   Theyareprovidedwiththepractice of Hindi grammar.

Semester-IV

Paper:Upanayas:Natak:SadhantkiVayakarantathaBhaktiKaal

CO1:   The students are provided with the knowledge about bhakti period of Hindi literature.

CO2:   Theywillbeabletounderstandaboutthevariousliteraryforms.

CO3:   They are provided with the knowledge of social reformer and revolutionary HindiauthorPrem-chandthroughhis novel _Nirmala'.

CO4:   TheywillgetthePracticalknowledgeofgrammar.

Semester-V

Paper:VishishtKaviAvamKavyaSidhant,KaamkajiHinditathaReetikaal

CO1:StudentsareprovidedwiththeknowledgeofhistoryofHindiliteratureespeciallyaboutreetikaal.

CO2:   Theywillgetknowledgeaboutlinguistics.

CO3:   They will earnandunderstandHindi-asanofficiallanguage.

Semester-VI

Paper:LaghuVidha,AadhunikKaal,NibandhLekhantathaParibhashikShabdawali

CO1: StudentswilllearnaboutofficiallanguageHindi.

CO2: They are provided with the knowledge of contemporary Hindi literature.

CO3: Theywillgettheknowledge about various Hindi genres.

CO4: Theylearnandunderstandaboutvocabulary.

M.A. (Hindi)
CourseOutcomes
Semester-I
Paper-I:AdhunikHindiKavye(DivediyugeenAvamChayavaad)

CO1: Studentswilllearnaboutcontemporaryliterature.

CO2: They are provided with the knowledge of Sociological, Psychological aspects of our society.

CO3: They will learnaboutdifferentpoestlike–MaithlisharanGupt,SuryekantTripathiNirala,
JaishankerParsadetc.

CO4: TheyareprovidedwiththeknowledgeofhistoricalliteraturelikeRamayana, Mahabharata etc.

Paper-II:HindiSahityeKaItihas(Aadhikaal,Bhagtikaal,Reetikaal)

CO1: StudentswilllearnaboutoriginofHindiliterature.

CO2: They are acquainted with the knowledge of history of Hindi literature.

CO3: They are provided with the knowledge of different aspect of literature.

CO4: Theywilllearnaboutourreligiousepiclike–Ramchritmanas.

Paper–III:BhartiyeKavyeShastraAvamSahitalochna

CO1: Students are provided with the knowledge of linguistics.

CO2: TheylearnaboutdifferentformsofHindipoetryandprose.

CO3: They will be acquainted with the basic concepts related to technical aspects of Hindi.

CO4: Theyare provided withtheknowledgeofHindigrammarand dialects.

Paper-IV: PrayojanmulakHindi

CO1: Thestudentsareprovidedwiththeknowledgeofhindiasofficiallanguage.

CO2:Students will learn about technical and official vocabulary used in Hindi language.

CO3:Theyare acquainted withthedetailknowledgeoffunctionalHindi.

CO4: Theyareprovidedwiththeknowledge of computerandinternet.

Paper-V:NatakandRangmanch

CO1:StudentswilllearnaboutthehistoryofHinditheatre.

CO2:TheyareprovidedwithSociologicalandpsychologicalstudyofIndianplay.

CO3:They will learn and understand the various aspects of social psychology through Hindi plays.

CO4:Studentswillgetknowledgeaboutgreathindiwriterlike–BhartenduHarishchandra,Jai
Shanker Parsadetc

Semester-II

Paper-VI:AadhunikHindiKavye–ChayavaadottarHindiKavye

CO1: ThestudentsareprovidedwiththeknowledgeofmodernperiodofHindi literature.

CO2:   Theywilllearn and understand ofsocialscenarioof India.

CO3:   They will be providedwiththeknowledgeofpoliticalaspectsofindia.

CO4:   Theyaretaughtaboutvariousmodernpoetlike–Muktibodh,Aagye,Dhumiletc.

Paper-VII:HindiSahityeKaItihas(AdhunikKaal)

CO1:   Studentswilllearnandunderstandaboutvariousformsofliterature.

CO2:   They will be provided with the knowledge of contemporary Hindi literature.

CO3:   Theyare get knowledge aboutsocial,religiousaspectsof society.

CO4:   Theywilllearnaboutvariouscharacteristicsofmodernliterature.

Paper-VIII:PashchatyeKavyeShastra

CO1:   Students will learn about the various theories of western philosophers about literature.

CO2:   They will learn and understand about the impact of various revolutions on literature.

CO3:   Theywillget knowledge about differentaspectsofKavshastra.

CO4:   Theywillbeprovidedwiththepracticalknowledge ofHindicriticism.

Paper-IX: MediaLekhan

CO1:   Studentswilllearnandunderstandaboutmedia,internetandmodesof MCVP.

CO2:   Itwillhelptoimprovewritingskillseditingskillsaswellasreading-

skills,newspapermakingskillsamongststudents.

CO3:Theywilllearnandprovidedwiththeknowledgeaboutcomputerpracticalworkinhindi.

Paper-X:NatakkarMohanRakesh

CO1:   Students will study about psychological and sociological aspects of society through hindiplays.

CO2:   They will get knowledge about the Role of Indian theatre/ art in modern society.

CO3:   TheywilllearnaboutwritingskillsofNatak.

Semester-III

Paper-XI:PracheenAvamMadhya Kaleen HindiKavaya

CO1:   ThestudentswillbeacquaintedwiththeAadikaleenandBhakti Kaleen Hindipoetsandtheirwritings.

CO2:   Theywilllearnabout NirgunandSagunpoetry.

CO3:   They   areprovidedtheknowledgeregardingdevelopmentofHindiLanguagewiththesincere-effortsofMadhakaleenpoets.

CO4:   Students will learn regarding Indian culture through the poetry of eminent Madhakaleenpoets.

CO5:   AwarenessiscreatedamongstudentsregardingtheHindi Suffi-Poetry.

Paper-XII:AadhunikGdayaSahitya

  CO1:Studentwillgetinformationaboutthehistory.

  CO2:StudentswillgetknowledgeaboutdifferenttypesofmodernHindiStory,Noveletc.

  CO3:TheywillgetinformationaboutdifferenttypesofModernHindi prose.

  CO4:TheywillbeacquaintedwiththemodernProse-writers.

  CO5:StudentsareprovidedtheknowledgeregardingMunshiPremchand, MahadeviVerma, BhismSahni,

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Yashpaland their prose writings.

CO6:Awarenessiscreatedamongthestudentsregardingthemoderndaytodaysocialproblemsandtheir solutions throughthedifferentwritings.

Paper-XIII:Bhasha-Vigyaan

CO1: The students will be acquainted with the language, its components, forms etc

CO2: Thestudents will learnaboutlinguistics.

CO3: TheyareprovidedtheknowledgeregardingDhawani-Vigyan,AarthVigyan of language.

CO4: Theywilllearnaboutdifferentlinguisticsforms.

Paper- XIV:PatarkaritaParkashan

CO1: ThestudentswillbeacquaintedwiththeimportanceofPrint andElectronicMedia.

CO2: ThestudentswilllearnabouttheroleofNewspapersandmagazinesinourlife.

CO3: Theyareprovidedthe knowledge regardingtheroleofEditors,Sub-Editor,Correspondent,Proof-readersetc.inthe Newspapers.

CO4: TheywilllearnthewritingskillforNewspapers,Magazinesetc.

CO5: They will get information about the scope of Print Media and how they can choose it as aprofession.

Paper-XVOption (I):BhaktikaleenPoet-Surdass

CO1: Thestudentswillbeacquaintedwiththegreatwritings.

CO2: TheywilllearnaboutPushtimargeeye Bhakti.

CO3: They are provided the knowledge regarding philosophical element in SurdassKavaya

CO4: They will get knowledge about "Nirgun-Sagundavand" prevailed at that particular era.

CO5: Awarenessiscreatedamongthestudentsregardingthelyricalpoetry.

Semester-IV

Paper-XVI:MadhyakaleenHindiKavaya

CO1: ThestudentswillbeacquaintedwiththeMadhayakaleenhindipoetry.

CO2: ThestudentswilllearnabouthindiKrishna Bhakti-Dhara.

CO3: TheywillgetknowledgeaboutthegreatHindiEpic"RamCharitManas"anditsimportanceinthat period.

CO4: They are provided the knowledge regarding the relevance of Madhakaleenhindi poetry inpresentera.

CO5: AwarenessiscreatedamongthestudentsregardinghindiReeti-kaleenpoetrywiththeBihari'spoetryand its unique features.

Paper-XVII:AadhunikGadyaSahitya

CO1: The students will be acquainted with the modern essay-writings, auto biographic in hindiliterature.

CO2: They will learnaboutMahatmaGandhi'slife-sketch,hisgreat doings,greatthoughtsthroughhisautobiography.

CO3: Theyareprovidedtheknowledgeregardingdaytodaysocialproblemsandtheirsolutionsthroughdifferentprose-writings about greatauthorfromPunjab.

CO4: They are provided knowledge regarding Modern Society through "AadheAdhure" playauthoredbyMohanRakeshasthisplayisthemirrorofmodernsocietyandits problems.

Paper-XVIII:HindiBhashaaurDevnagriLipi

CO1:   Studentswilllearnaboutoriginandhistoryofdifferentlanguages.

CO2:   Theywillbeacquaintedwiththehistoryofhindilanguage.

CO3:   Theyareprovidedthe knowledge regardingtheDevnagriLipi.

CO4:   Awarenessiscreatedamongthestudentsregardingdifferentdialectsofhindilanguage.

Paper-XIX:Rajbhasha-Prashikshan

CO1:   Thestudentswillbeacquaintedwiththeimportanceofofficiallanguages.

CO2:   Thestudentswill get informationabouthindiasanofficial language.

CO3:   Thestudentswilllearnaboutthedifferentconstitutionalarticlesregardingofficiallanguagehindi.

Paper-XX:UttarKavayadharakeSandharbhmeinGuruTegBahadurkiBanikaVisheshAdhyan

CO1:Thestudentswill be acquaintedwiththeUttarKavayadharaofhindi literature.

CO2:Thestudents willlearnaboutGuruTegBahadur'sBani.

CO3:WilllearnregardingtheimpactofGuruji'sBanionPunjabiandhindiliteratureofPunjab.

CO4:StudentsareprovidedtheknowledgeregardingtheprogressiveattitudeofGuruji'sBani.

Department of Punjabi

Punjabi in B.A. (BachelorofArts)

Semester-I

Paper:GeneralPunjabi

CO 1:Students will learn about the moral value of our society with references of Biography.

CO2:Studentswillalsolearnaboutthe sound–planningofphonetics.

CO3:StudentswillgaintheculturalknowledgeofPunjab.

Semester-II

Paper:GeneralPunjabi

CO 1:Students will learn how to handle the social, economic and political problems.

CO2:Students will gettheinformationaboutwordsstructure.

CO3:Theywilllearntruthsoflifefromidiomsandphraseswhicharetreasureofknowledgeofourancestors.

Semester-III

Paper:GeneralPunjabi

CO1:It provides theknowledgeaboutthepoetsandtheirpoetry.

CO2:Studentswillfeelattachedwithnatureandenvironmentafterreading.

CO3:PoetrywillincreasetheknowledgeaboutPunjabiculture, moral valuesinstudents.

Semester-IV

Paper:GeneralPunjabi

CO 1:Students will learn the ways of writing Business letter like sales letter, complaint letter andin-quiryletter.

CO2:Studentswilllearnhowtowriteanduse Punjabi inaccuratewordsaswellasspecialfocusonpronunciation.

CO3:Studentswill get theknowledge about martyrsofcountrywithoneact plays.

CO4:Theywill acquiretheknowledgeaboutscripts,andhowitissuitableforthelanguage.

Semester-V

Paper:GeneralPunjabi

CO1:Studentswillacquiretheknowledgetowritecompositions.

CO2:Studentswill learn aboutthevowel and soundsinlinguistics.

CO3:Studentswilllearnaboutcausesofsocialproblemslikepoverty,genderdiscrimination,andcastdiscrimination.

CO4:Theywill also learnhowtohandletheproblemsofsociety.

Semester-VI

Paper:GeneralPunjabi

CO1: TheywillacquireknowledgeaboutcultureofuncivilizedtribesofAndamanandNicobarIsland.

CO2: StudentswilllearnthecultureofvariouscountrieslikeSwitzerland,Bangkok etc.

CO3: Studentswilllearnaboutthemoralvalueofoursocietywiththereferencesofstories.

M.A. (Punjabi)

Semester-I

Paper:IGurmat-Kav

CO 1: Students will learn about the history of ten guru sahibaans and their Gurbani .

CO 2:Students will gain the knowledge about the main motif of our life by Gurbani

Paper:IIPunjabiSufikav

CO1:StudentswilllearnaboutSufisaintsandtheirsruggles,ethicallifeandothersignificantaspectsoftheirlives.

Paper:IIISahitSidhantAteBhartiKaavShaster

CO1: Students will get proper literary information and its importance.

CO2: Theybecomefamiliarwiththeboundariesandmodesofliterature.

CO3: They will get the Extensive information on Indian and western literature

CO4: Theywillgetthe knowledge about criticismofliterature.

Paper:IVLokdharaAtePunjabiLokdhara

CO1: Students will gain the knowledge about the folklore and its various types.

CO2: Studentswillalsolearn about folkreligion,believesandrituals

CO3: StudentswillbeinformedaboutthedifferentPunjabifolkart.

Paper:VTunatmikSahit

CO1:Studentswilllearnaboutcomparativestudyaswellastranslationofliterature.

CO2:StudentswillexperiencethetragedyofIndia-Pakistanseparationin1947.

CO3: Studentswillgain knowledge abouttheabsenceoflifethroughabsurdplays.

Semester-II

Paper: VIBhaktiKav

CO1:   Students will learn and focus on the pure pronunciation and linguistic of Gurbani.

CO2:   Thestudyofpoemsleadthestudentsto follow rightpathinrealsense.

Paper: VII MadhkaleenPunjabiBirtanatKav

CO1:   Students will gain the knowledge about the medieval Punjabi literature

CO2:   Studentswillgettheknowledge about our gurusahibans.

CO3:   Withthereferencesof Punjabi kissa-kavstudentswilllearnaboutourmedievalculture.

Paper: VIIIKhojAtePunjabiAlocna

CO1: Students will get the information about the history of Punjabi criticism.

CO2: Theywillbeabletodopracticalcriticismof literary works.

CO3: TheywillbegaintheknowledgeabouttheforeigncriticismaswellasIndiancriticism

Paper:IXPunjabiSabheyachar

CO1: Studentswillgettheopportunity tostudyculture,folk,literature,Punjabi plays and theatre which they will experience personally by their interaction with theirpaternal grandmothers.

CO2:Someofthestudentsevenrecordthefolksonginthemelodiousvoiceoftheirgrandmother.

Paper: XPatarkariAtePunjabiPatarkari

CO1:Studentswillgettheinformationregardingtherulesandactivitiesofjournalism.

CO2:Students will gain the knowledge about all the activities related to journalism in Punjabi.

CO3:Studentswill learn electronicmediasuchasGoogle,Facebook,Whatsappetc.

Semester-III

Paper:XIAdhunikPunjabiKavita(1960Tak)

CO1: After knowing the principle, history and paradigm of modern Punjabi poetry, the informationof-studentswillincrease.

CO2: Students will read and understand the collection of poetry and will also learn about poet's ideol-ogy.

Paper: XIIPunjabiNovel

CO1:Students will able to learn about the origin of Punjabi novel and its development under theeffectof English novel.

CO2:Students will learn about Nanak Singh who is first reformist novelist, wrote about corruption,reli-gious propagandas, women's condition in made dominating society.

Paper: XIIIPunjabiBhashaAteBhashaVigyaan

CO1: Studentswill get therichknowledgeaboutPunjabilanguage.

CO2: Students will learn about the developments in the Punjabi language.

CO3:Theywillbemotivatedtoopt the researchinPunjabilanguage.

Paper: XIVPunjabiSahitDaItehas(1850Tak)

CO1:Thispaperwillnotonlyintroducesthestudentstothemeaningofliterature;totheimportance of literature in real life or to the information related to various renowned names inthe literary history but also inspire them to go through the process of converting their ideasintodifferentgenres.

CO2: History of Punjabi literature gives them a holistic approach towards the era in which any work has been imbibed by the literary artist.

CO3: It will provide politically, social, economic as well as cultural insight into the development of work over the period of time.

Paper: XV Parvasi Punjabi Sahit

CO1: It will provide the informative knowledge about the syllabus and Diaspora.

CO2: All topics concerns with human values and social problems of post modernism.

CO3: Social & cultural perspective of western countries.

Semester-IV

Paper: XVI Adhunik Punjabi Kavita (1960 Ton Bad)

CO1: The poetry after 1960s will be discussed with the students.

CO2: They will be accepted the modern social experience by reading the poems of modern Punjabi poets Jagtar, Surjit Patar and Sukhwinder Amrit.

Paper: XVII Punjabi Nikki Kahani

CO1: Students will develop their vision to understand life and how to live life by reading stories of different Punjabi writers.

CO2: They will understand the value of relation, social values and real meaning of life.

Paper: XVIII Punjabi Bhasha Ate Bhasha Vigyaan 2nd

CO1: Love for mother tongue will increase, with which the propagation of self-written writings among the students will increase.

CO2: Students will be motivated to select Punjabi linguistics as a subject for civil services.

CO3: By comparing Punjabi language with other languages, they will understand the importance of mother tongue.

Paper: XIX Punjabi Natak

CO1: Students will develop their vision to understand life and how to live life.

CO2: They will understand the value of relation, social values and real meaning of life

Paper: XX Punjabi Sahit Da Itehas (1850 Ton Hun Tak)

CO1: Paper of theatre not only motivated them to become an audience to meaningful theatre but also lured them to visit mesmerizing creation of Sh. Gurbaksh Singh Preetladi, Preet Nagar from the times of undivided Punjab.

CO2: They will explore this Mecca of Punjabi Rangmanch (theatre) and explore the literature more after visiting Balraj Sahni open air theatre.

CO3: They able to learn how they will survive in the fast changing society with different values and systems.

B.A. with Elective Punjabi
Course Outcomes
Semester-I
Paper: Elective Punjabi
CO1: Students will learn about the moral value of our society with references of Biography.

CO2: Studentswillalsolearn about the sound–planning ofphonetics.

CO3: Studentswillgaintheculturalknowledge.

Semester-II

Paper:ElectivePunjabi

CO1: HistoryofPunjabiliteraturegivesthemaholisticapproachtowardstheerainwhichanyworkhasbeen imbibed bytheliteraryartist.

CO2:It will provide political, social, economic as well as cultural insight into the work in literatureover the period oftime.

CO3: Studentswilllearnthewaysofwritingbusiness, sales, letter,complaintandinquiryletters.

Semester-III

Paper:ElectivePunjabi

CO1:StudentwilllearnaboutmedievalhistoryofPunjabiliterature,itsoriginanddifferentphases.

CO2:StudentsgetknowledgeaboutprominentwritersofPunjabishort-

storyandtheirideologyaboutthechangingscenario of Punjabiin 21stcentury.

CO3: Theybecomeabletolearnhowtheempoweredwomenfacingmanychallengesintheirsuccessfullives.

Semester-IV

Paper:ElectivePunjabi

CO1: Studentsbecomeabletolearnabout different poeticgenre.

CO2: UnderstandaboutChandiDi War andsemihistoricalNadirShah Di War.

CO3: Learn about richness of Sufi poetry and its influence on other Punjabi literary traditions.

CO4: StudyPunjabiKissaagenreofromantictragedy.

Semester-V

Paper:ElectivePunjabi

CO1: Students willenrich knowledge by studyingGurmatKav, SufiKav, WarKavandKissaKav.

CO2: This Poetryinculcatesthestrongmoral values, ethicsandIndiancultureinstudents.

CO3: StudentscometoknowaboutproblemsandchallengesofDiaspora.

04: Theystudyandunderstandthereasonsofincreasingcuriosityamongyouthtomoveandsettleabroad.

CO5: ChandanDeOhleplaydepictsPunjabiculture,heritageandstatusofwomeninPunjab.

Semester-VI

Paper:ElectivePunjabi

CO1: SocialScenarioofMedieval period

CO2: HistoryofPunjabiliterature from9thCenturyto 16thcentury

CO3: Students can learn and come to know regarding trends & ideology of classic Punjabi poets.

Punjabi in BSc.IT,B.Voc,BFA,BDMM(AllProfessional Classes)CourseOutcomes-GeneralPunjabi

Semester-I

Paper:GeneralPunjabi(Professional Classes)

CO1: Writingskillsofthestudentswillbeenhanced.

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CO2: Studentswillbeencouragedtotakepartinsocialandpoliticalactivities.

CO3: TheywillunderstandthesignificanceofPunjabilanguage.

CO4: Punjabi languagewillbepromotedamongthestudents.

Semester-II

Paper:GeneralPunjabi(ProfessionalClasses)

CO1: StudentswillstartwritinginPunjabilanguage.

CO2: Student will pay attention towards correct and pure Punjabi writing.

CO3: Studentwilllearngrammaticalrules.

Punjabi in B.A./BSc./ B.Com/BBA/ B.Voc/BCA/BFA)CourseOutcomes-BasicPunjabi

Semester-I

Paper:BasicPunjabi

CO1: Studentswilllearnaboutdaysofweek,nameofmonthsandnameofseasons inPunjabilanguage

CO2: Theywilllearntowriteandreadcountingfromonetohundredinpunjabi.

CO3: StudentswilllearnvocabularywordsofPunjabilanguageusedindailyroutine.

Semester-II

Paper:BasicPunjabi

CO1:Studentswilllearnwritingformalandinformallettersandwillunderstandvariousproverbsandidioms

CO2:Through proverbs and idioms they will learn about richness of Punjabi literature.\

CO3:Studentwillbecome able tounderstand words and sentenceformation.

Semester-III

Paper:BasicPunjabi

CO1: Studentswillgaintheknowledgeaboutdifferentcomponentsofgrammar.

CO2: They will be able to write about current and new issues through paragraph writing

CO3: Studentswill learn tocommunicatewitheachotherinPunjabi language.

Department of Sanskrit

Sanskrit in B.A. (BachelorofArts)

Course OutcomesSemester-I

Paper:PuransardhshatkamtathaViyakaran

CO1: StudentswillstudylifesketchofBhagatPuranSinghfromthebookPuransardhshatkam.

CO2:TheywillhavedetailedknowledgeaboutactiveparticipationofBhagatPuranSinghinsocialwelfare.

CO3:TheywillgetmotivatedbythecharityworkofPuranSinghfororphans,handicappedandpoorpeople.

CO4: Theywillunderstandhisconcernaboutenvironmentalissues.

Semester-II

Paper:NeetishatkamtathaViyakaran

CO1: Studentswillstudythedifferentaspectsregardingcompassionatehu-manismfromthebookNeetishatkam.

CO2: Theconceptofdefiningignorantpeopleonthebasisofprescribedbookwillbetaughttothestudents.

CO3: Theywillbeabletoanalysethemeritsofsilenceandinteractionwithspirituallyenlightenedsouls.

CO4: TheGrammaticalfeaturesofdifferentwordformswillbetaughttothem.

Semester-III

Paper:SwapanvasvdattambyBhasatathaViyakaran

CO1: Students will study life fiction based natak- Swapanvasvdattam by Bhasa.

CO2: Theywillgetknowledgeregardinghermitagewayof life.

CO3: Respect forWomenwillbetaughttostudentsthroughthenatak.

CO4: Theywillunderstandthecorrectarticulationofwordsthroughlanguage.

Semester-IV

Paper:ShrimadbhagvadGita-FourthChaptertathaViyakaran

CO1: Students will be taught about eternal principles of Karma Theory.

CO2:Thewill understand the objective of Lord's incarnation on earth.

CO3: TheywillacquireknowledgeofKarma,VikramaandAkarma.

CO4: Theywilllearnaboutdifferenttypesof Yajnas.

CO5: They will be made aware regarding source for the attainment of knowledge.

Semester-V

Paper:Labdh-Pranash(Panchtantra)

CO1: Narrative literature (Katha Sahitya) will be discussed with the students.CO2: Depiction of Ethical Moral values through allegory will be discussed.

CO3: ThestudentswillbeimpartedknowledgeoffourVedas.

CO4: UseofpracticalwordsinSanskritwillbediscussed.

Semester-VI

Paper:ShrimadbhagvadGita-SecondChaptertathaViyakaran

CO1: Studentswillget knowledge aboutnatureofselflesskarmas.

CO3: They will be able to understand the Importance of maintaining balance in life.

CO4: Theywill be abletoanalysemysticismofsoulandtheultimate God.

CO5: Theywillbeabletounderstandthedefinitionofastablesoul.

Department of Music Vocal

Music in B.A. (BachelorofArts)
Course OutcomesSemester-I
Paper:Music Vocal(Theory)

CO1: StudentswouldbeabletoknowabouttheirbasicinstrumentTanpura,itsparts.Theywillalso learnba-sictermsofmusic.

CO2:Studythebiographiesofmedievalandpresentmusicmasters and learn the folktradition of Punjab.

CO 3: Analyse the description of detailed and non- detailed ragas and talas with notations.

CO 4:To know about the rich tradition of Gurmatsangeet and their technical terminology.

Semester-I

Paper:Music Vocal(Practical)

CO 1:Students would be able to study 3 ragas in detail along with comparative study of three non-detailedragas.

CO2: LearnSargam-geetandplayingofharmoniumbasedonBilawalthaat.

Semester-II

Paper:Music Vocal(Theory)

CO1: StudentswouldbeabletoknowaboutthehistoryofIndianmusicduringVedicperiod. And basicmusicalterms of Indianmusic.

CO2: Studythebiographiesoftwofoundermusicians/musicologistofthemodernmusiceducationsystem.

CO3: Analyzethedescriptionofdetailedandnon-detailedragasandtalaswithnotations.

CO4: ToknowaboutthecontributionofBhaiMardanaJitowardsGurmatsangeetandtechnicalterminologyof Gurmatsangeetprabandh.

Semester-II

Paper:Music Vocal(Practical)

CO 1:Students would be able to study three ragas in detail along with comparative study of threenon-detailed ragas. At the same time the students would be introduced to a different style ofclassicalsingingi.e.VilambitKhayal.

CO 2: Learn Shabad in prescribedragasandplayingAlankaars on harmonium based onKalyan,KafiandAsawarithaat.

CO 3: Learn the ekgun and dugun of two talas on hand and two talas on tabla in addition. At thesametime the students would also get a chance to imbibe the folk tradition of Punjab i.e.Suhag.

Semester-III

Paper:Music Vocal(Theory)

CO1:StudentswouldbeabletoknowaboutthehistoryofIndianmusicfrom14th to17th century.

CO2: Study aboutmostimportantinstrumentTanpura, its tuning methodsand the study of tonesandovertonesofit.

CO3: Study the biographies and contribution of three renowned vocalist of 20th century towardsIndianclassicalmusic.

Semester-III

Paper:Music Vocal(Practical)

CO1:Students would be able to study three ragas in detail along with comparative study of three non-detailedragas..

CO2:Learntheekgunanddugunoftwotalasonhandandonetaalontabla.

CO3: PlayPunjabifolksongandalankaars on harmoniumbasedonKafithaat.

Semester-IV

Paper:Music Vocal(Theory)

CO1:ThroughthiscourseStudentswouldbeabletodeveloptheirknowledgeaboutKhayalsingingstyleandsome other singingformsofIndian classical music.

CO2:Learnthemethodsofformationsof484ragasfromonethatguidedbyPt.Vyankatmakhi.

CO3: Analysethedescriptionofdetailedandnon-detailedragasandtalaswithnotations.

CO 4: Study the biography of three renowned musicians of 20th century.

Semester-IV

Paper:Music Vocal(Practical)

CO1:Studentswouldbeabletostudythreeragasindetailalongwithcomparativestudyofthreenon- detailed ragas. At the same time the students would learn VilambitKhayal, DrutKhayalandoneTaranain prescribed ragas.

CO2: Learn theekgun and dugun of two talason hand and one taal on tabla in addition. At thesametime the students would also get a chance to learn one Lakshan-geet in any prescribedraga.

CO3: Playcinematic song, nationalanthemandalankaarsonharmoniumbasedonKafithaat.

Semester-V

Paper:Music Vocal(Theory)

CO1:StudentswouldbeabletoknowabouttheglobalizationofIndianmusic.

CO2:StudyaboutlightclassicalalongwithChaturangandfolkmusicofPunjab.

CO3:Analyse the description of detailed and non-detailed ragas and talas with notations.

CO4:Studyaboutvoiceculture, stageperformanceandrelationofmusicwithyoga.

CO 5: Study biography of one renowned folk singer of Punjab and two classical music scholars ofIndia.At the same time the students would get knowledge about classical based singingstylesofGurmatsangeet.

Semester-V

Paper:Music Vocal(Practical)

CO1:Students would be able to study three ragas in detail along with comparative study of threenon-detailed ragas. At the same time the students would learn VilambitKhayal, DrutKhayal,Tirvat/Chaturangin prescribed ragas.

CO2:Playalankaarsonharmoniumbased on Asawarithaat.

Semester-VI

Paper:Music Vocal(Theory)

CO1:Students would be able to know about the historical development of Indian music of modernperiod. At the same time they would develop their knowledge about ghranas of Khayalsingingand some singingforms of Indian classicalmusic.

CO2: Study the biographies of three renowned music scholars and musicians of 20th century. Theywouldalsostudythedevotionalimpactofmusicforhumanlife.Atthesametimethestudentwould study about the contribution of great Saint Soldier' Sri Guru Gobind SinghJi towards thetraditionofGurmatsangeet.

Semester-VI

Paper:Music Vocal(Practical)

CO1:Students would be able to study three ragas in detail along with comparative study of threenon-detailed ragas. At the same time the students would learn Vilambit Khayal, DrutKhayal,oneDhamarandoneShabad/Bhajaninprescribedragas.

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CO 2: Learn theekgun and dugun of two talason hand and one taal on tabla in addition. At thesame time the students would also get a chance to learn one Lakshan-geet in any prescribedraga.

CO3: Playone cinematic songandfivealankaars on harmoniumbasedonKhmaajthaat.

Department of Education

Semester I
Paper: Foundations of Education
CO1: Analyze the historical foundations of schooling in the United States.

CO2: Analyze the philosophical foundations of schooling in the United States.

CO3: Analyze the sociological foundations of schooling in the United States.

CO4: Create a personal philosophy of teaching statement.

Semester II
Paper: Philosophical Foundations of Education
CO1: Discuss the relationship between theory, philosophy and educational practice

CO2: Describe the historical context of the various philosophies.

CO3: Compare and contrast the philosophical perspectives of the various philosophers.

CO4: Discuss each of the philosophies as they relate to the aims of education, teaching methodologies, curricular strategies, and how architectural design is supported by the various philosophies studied.

Semester III
Paper: Sociological Foundations of Education
CO1: Critically evaluating the significance of enduring racial issues in education.

CO2: Critically evaluating the significance of exceptionalities in education.

CO3: Critically self-reflecting on how individual views on issues of diversity influence how we engage within the classroom and society.

Semester IV
Paper: Psychological Foundations of Education
CO1: Understand the foundation of Education and disciplinary relationship between Education & Philosophy.

CO2: Get an idea of the Philosophical bases in Education.

CO3: Acquire knowledge of the Western & Indian Schools of Philosophy and their impact on Education.

CO4: Perceive the values enshrined and educational provisions in the Indian Constitution

Semester V
Paper: DevelopmentofEducationin India
CO1: To enable the students to understand the structure and functions of higher mental processes

CO2: To enable the students to understand the meaning and scope of educational psychology.

CO3: To enable them to understand the dimensions of growth (i.e. social, emotional, creative and intellectual) and the causes of individual differences.

Semester VI

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Paper: Modern Indian Education

CO1: Develop an understanding regarding constitutional provisions of education for different sections of society in India.

CO2: Assess the achievements of different programmes like UEE ad ODL initiated by the Government of India. CO3: Understand the problems and issues of different educational programmes initiated by the Government of India.

Department of Sociology

Sociology in B.A. (Bachelor of Arts)
Course OutcomesSemester-I
Paper:Sociology

CO1: It gives better idea and clarity about the basic concepts on which any society is based.

CO2: Students gettheknowledgeabouttherelationsthatalreadyexist.

CO3: Theylearnaboutthebasicrulesandregulationsofthesocietybyfollow-ingwhichtheycouldgainrespectandstatusintheirownsociety.

CO4: Thesocialstructurebecomesvisibletothestudentswhicharehiddentootherlayman eyes.

Semester-IIPaper:Sociology

CO1: Studentsgetbetterunderstandingoftheprocessesthattheyhavealwaysbeenpartofliketheprocess ofSocialization.

CO2: Practicalfunctioningofthecultureandsocietybecomescrystalcleartothestudentsasresidentsofthe society.

CO3: Theycouldidentifytheagenciesthroughwhichasocietycontrolsitsparticipants

CO4: Theygettorecognizethedifferentdimensionspresentinanysociety.

Semester-IIIPaper:Sociology

CO 1: Studentsunderstand the socialinstitutionsin their deeperaspects.Relations, kinship, itstypes, rulesandregulations- allarestudiedinsuchawaythattheycouldobserveeverythingmore clearly intheirprac-ticallife.

CO 2: They get to study various forms of society and its structures which let them have a clear sightofso-cietyinreality.

CO3: Thispapermakesthemmore practical ingettingknowledgeaboutsocialsystem.

Semester-IVPaper:Sociology

CO1: Thispapergivesinsightintothejourneyofsocialdevelopment.

CO2: Studentswitnessthehistoryofsociety;howasocietyevolvesandtheprocessesthroughwhichasocie-typassesthroughdifferentphases.

Semester-VPaper:Sociology

CO1: ThispaperispurelybasedonthethoughtsofeminentSociologistswhohaveplayedsignificantrolein developingSociologyasa separate subject.

CO2: It gives brief account of various ideologies prominent in different societies

Semester-VIPaper:Sociology

CO1:	AsstudentsaretendtomoveaheadforMastersleveldegree,thispaperpreparesthemforupcomingpro-spectsofresearchintheirrespectivefields.

CO2:	It gives deep and detailed information about guidelines, procedure, means, and modes required for any social researcher to conduct research

CO3:	Thepaperservesasapre-researchminiguidetoanystudentwhowishestopursueherhigherstudies.

Department of History

History in B.A. (Bachelor of Arts)

Course OutcomesSemester-I

Paper:AncientIndianHistory

AftercompletingthecourseonAncientIndianHistory,thestudentwillbeabletolearn.

CO1: How,when and where people first developed cultures. In terms of evolution, how theyevolvedfroma primitive toa civilized man.

CO2:	Analysetherelationshipintermsofsociety,economy, languageandreligionbetweenpastand present.

CO3:	To understand various aspects of architectural styles, literary writings and cultural facets oftheancientsociety.

CO4:	UnderstandthebasicprinciplesofadministrationinancientIndia

CO5:	Overall the student will study various aspects of Ancient Indian History from the IndusValley-CivilizationtoVardhanas.

Semester-II

Paper:MedievalHistoryofIndia(1000-1707A.D)

MedievalIndiarefersto a long period ofHistoryofIndianSubcontinentbetweenAncientandModernperiod.AftercompletingthecourseonMedievalIndianHistory,thestudentwillbeableto learn.

CO1; The Rajput's contribution in the Medieval History of India. Various developments in the fieldofart,language, cultureandreligion.Emergence of BhaktiandSufimovements.

CO2:How early medieval period witnessed wars among regional kingdoms from North to South, and late medieval period saw a number of invasions by Mughals, Afghans, and Turks.

CO3: Understand the transition of European traders who, by the end of the 15th century, started doing trade and by the 18th century were a formidable political force.

CO4: Analyse various administrative and cultural aspects of medieval Indiaemester-III

Paper:ModernIndianHistory(1707-1947A.D)

Afterthecompletionofthecoursethestudentwillbeabletolearn.

CO1: Understand the political fabric of India around the 18th century. How various dynasties and king-doms came in conflict with British.

CO2: Analyse how British transformed the economic, political, and social fabric of India. Was this transformation through acts or otherwise?

CO3: The beginning of the freedom struggle in light of various movements starting from Swadeshi to Quit India Movement.

CO4: Understand the emergence of socialist and communist movements in India..

Semester-IV

Paper:HistoryofPunjab(1469-1799A.D)

Afterthecompletionofthecoursethestudent will beabletolearn.

CO1: Understandtheadvent ofSikhisminPunjabandcontributionsof10Gurustowardsdevelopment ofSikhpanth.

CO2: Analyse the role played by Banda Singh Bahdur and other brave Sikh generals in the SikhHistory.

CO3: Study the emergence of Dal Khalsa and Misls. Also the character and contribution of RanjitSingh.

CO4: Understand the political, social, economic, and religious conditions of Punjab and itscomparativeanalyseswithcontemporarytimes.

Semester-V

Paper:World History

Afterthecompletionofthecoursethestudent will beabletolearn.

CO1:Study of World History is the broadest and most comprehensive approach to the question ofwhowe areas both,individualand members ofthegroup.

CO2: Causesandimpactofmajorrevolutionsoftheworld.

CO3: Evaluatethegenesisandconsequencesoftwo world wars.

CO4: AnalysetheemergenceofpoliticalleadershipinChinaandJapan.

CO5: UnderstandtheemergenceofNATO,WarsawPact,LeagueofNations

Semester-VI

Paper:HistoryofPunjab(1799-1966A.D)

Afterthecompletionofthecoursethestudent will beabletolearn.

CO1:HowRanjitwasableto establish astrongLahoreprovinceandanefficientadministration.

CO2:Emergence of various social reform movements and the role played by Punjabi's in thefreedomstruggle.

CO3:Thesagaofpartitionof Punjabandthe rehabilitationprocessoftherefugees

CO4:EvolutionofPunjabisubain 1966.

Department of Physical Education

Physical Education: B.A. (Bachelor of Arts)

Course OutcomesSemester-I

Paper: APractical

CO1: Student are taught regarding physical education and his importance in life.

CO2: Studentsalsocometoknowabout physical trainingandcoaching.

CO3: They are alsotaughtaboutrulesofathletics,100mandshot put and volleyball andcricket.

Paper:BPractical

CO1:Students are taught about development of physical education and sports in India and

aboutsportsschemeslikeN.S.N.I.S., SAI.

CO 2:They arealso taught about games like Olympic, Ancient, Modern , Common wealth and Asiangames.

CO 3:They arealsotaughtaboutrules of athletics,100mandshotput andvolleyballandcricket.

Semester-IIPaper:APractical

CO 1: Students are taught about systems of body like skeletal system, muscular system, digestivesystem,andabouthumancellor movement andjointsof body.

CO 2: They are able to understand the rules of athletics, 100m race and long jump, hand ball andKho-Kho,

Paper:BPractical

CO 1: Students are imparted knowledge about health education, personal hygiene andcommunicablediseases.

CO 2:They are also taught about rules of athletics,100m race and long jump, hand ball and Kho-Kho

Semester-IIIPaper:APractical

CO 1: Studentsaretaughtabouttheeffectsof psychological factorsonsportsperformance.

CO 2: They are able to understand the rules of athletics, 200m race, discuss throw, football andyoga.

Paper:BPractical

CO 1: Studentsaretaughtaboutsportsandeconomy.

CO 2: Theyareabletounderstandtherulesofathletics,200mrace,discussthrow,football andyoga.

Semester-IVPaper:APractical

CO 1:Studentsaretaughtaboutyogaanditsimportanceandhowyogaeffectsthe body.

CO 2:They are able to understand the rules of athletics, 200m race, high jump,hockeyandwrestling.

Paper:BPractical

CO 1: Studentsareimpartedknowledge about bodysystemsandsportsinjuries.

CO 2**:** Theyareabletounderstandtherules ofathletics,200mrace,highjump,hockeyand wrestling.

Semester-VPaper:APractical

CO 1: Students are made aware about recreation and its importance also they are taught aboutbiomechanicallaws.

CO 2: Theyarealsotaughtaboutrulesofathletics, 800mrace,tripplejump,ballandjudo.

Paper:B(Practical)

CO 1: Students are taught about body postures and importance of warming up and cooling down insports

CO 2**:** Theylearntherulesofathletics, 800mrace,tripplejump,basketballandjudo.

Semester-VIPaper:APractical

CO 1:Students will get knowledge about tournaments and how to draw fixture of tournaments.

CO 2:They learn the rules of athletics, 1500m race, javelin throw, kabaddi and badminton

Paper-BPractical

CO 1:Students will get knowledge about therapeutic exercises, joints, muscles, component ofphysicalfitness.

CO 2:They are also taught about rules of athletics, 1500m race, javelin throw, kabaddi andbadminton.

Department of Economics

B.A. (Bachelor of Arts)Semester-I

Paper:MicroEconomics

Thestudents will be ableto:

CO1: understandtheconceptsofopportunitycost,trade-offs,benefitsofexchangeandimportanttermsandprinciples of single entities.

CO2: gaintheknowledgeoflawsofsupplyanddemandandproducers'equilibrium;andapplythesupplyand demand modeltoanalyse responses of markets.

CO3: apply supply and demand analysis to examine the impact of government regulations.

CO4: calculatepriceelasticityofdemand and otherelasticities.

Semester-II

Paper:IndianEconomy

The students will be able to:

CO1: know the development process in India after independence.

CO2: identify and analyse current issues in the economic scenario.

CO3: develop ideas of the basic characteristics of the Indian economy, its potential, and different resources.

CO4: develop a perspective on the different economic problems in India.

CO5: understand the role of the Indian Economy in the global context.

CO6: understand the importance, causes, and impact of population growth and its distribution, translating and relating them with economic development.

CO7: grasp the importance of planning undertaken by the government of India, have knowledge of the various objectives, failures, and achievements as the foundation of the ongoing planning and economic reforms taken by the government.

CO8: understand agriculture as the foundation of economic growth, analyse the progress and changing nature of the agricultural sector, and its contribution to the economy as a whole.

CO9: identify the role and contribution of secondary and tertiary sectors in the growth process of the economy.

Semester-III

Paper:MacroEconomics

CO1: In Macro Economics, students study the maximum level of income and employment in a country.

CO2: Students learn about inflation and deflation.

CO3: They learn about recession.

CO4: Students know about national income and collection, organization, and analysis of data.

CO5: Students study inflation and unemployment.

Semester-IV

Paper:InternationalEconomicsandPublicFinance

CO1: In this subject, students study international trade and its benefits for mankind.

CO2: They study gains from trade and economic development due to trade.

CO3: They study free trade and protection policy.

CO4: They learn about WTO and GATT.

CO5: They gain knowledge about the nature and scope of public finance and taxes.

Semester-V

Paper:EconomicsofDevelopment

The students will be able to:

CO1: know about central themes, essential tools, and concepts of development economics.

CO2: understand what makes underdevelopment persist and what helps development succeed.

CO3: understand the difference between growth and development.

CO4: analyse contemporary economic development issues.

Semester-VI

Paper:QuantitativeMethodsforEconomists

Students will be able to understand:

CO1: the concept of sets, illustrate and apply basic set operations.

CO2: the rules for calculating derivatives, uses, and applications in calculating the inter-relationship among total, marginal, and average cost and revenue, calculate maxima, minima, elasticity, decide the optimal level of production for a firm.

CO3: the concepts and use of functions, limits, and continuity.

CO4: the matrix operation, minors, cofactors, inverse of a matrix, matrix method, Cramer's rule to solve systems of equations.

B.A. / B.Sc. Economics

Semester-II

Paper:QuantitativeTechniques-II

Studentswillbeableto:

CO1:understand the role, scope, and functions of quantitative techniques.

CO2:understand basic statistical concepts such as data collection, classification, statistical series, and tabular, diagrammatic, and graphical representation of data.

CO3:describe the concept of statistical averages, use and apply measures of central tendency, dispersion, skewness, and kurtosis.

CO4:grasp the concept of correlation, analyse and interpret covariance and correlation coefficient.

CO5:know the use of regression analysis to analyse the underlying relationships between the variables and estimate regression coefficients.

Semester-III

Paper:QuantitativeTechniques-III

Studentswillbeableto:

CO1:understandMaximaandMinimaoffunction.

CO2:apply Maxima and Minima to solve various economic applications.

CO3:applyintegrationinConsumersurplusandProducersurplus.

CO4:understandtheconcept of matrices.

CO5:solve Simultaneous system of equations using Crammer's rule and Matrix Inverse method.
CO6:understandthelinear programmingusingGraphicandSimplex method.

Semester-IV
Paper:QuantitativeTechniques-IV
Studentswillbeableto:
CO1:understandMultipleLinearRegression
CO2:understandPartialandMultipleCorrelation.
CO3:understandNon-Linear Regressionandabletoestimatethefittingofvariousgrowthcurves.
CO4:understand concept of Random Variable, Probability Mass Function and Density Function,Mathematical Expectation (meaning and properties), Moments, Moment Generating FunctionandCharacteristic Function.
CO 6: understand Theoretical Probability Distributions: Binomial, Poisson,Normal, Beta and Gammadistributions.

Semester-V
Paper:QuantitativeTechniques-V
Studentswillbeableto:
CO1:understandandapplyprobabilitytheoryandtheoreticalprobabilitydistributionsineconomicapplications.
CO2:usesamplestatisticstotesthypothesisregardingpopulationandestimatethepopulationparameters and to makejudgmentsaboutthepopulation.
CO3:present aneconomicargumentinquantitativetermsanddevelopabilitytosolveit.

Semester-VI
Paper:QuantitativeTechniques-VI
Studentswillbeableto:
CO1: develop the understanding of regression analysis, detection of various problems associatedwithit.
CO2:apply econometric methods like autoregressive distributed lag models to different economictheories.
CO3:understandtheconceptofdummyvariableanditsapplicationindifferenteconomicsituations.

BBA/B.voc in Financial Market & Services

Semester-IPaper:BBA-105ManagerialEconomics-I
Sem III -B.voc in Financial Market & Services

CO1:Studentsstudyaboutdefinitionofeconomicsanditsnatureand scope.
CO2:They get knowledge about the law of demand and the concept of elasticity of demand.
CO3:They study methods of measurement of elasticity and cost curves.
CO4:They get knowledge about revenue curves.
CO5:Students study and learn about different market forms, e.g., perfect competition, monopoly, etc.
Semester-II Paper: BBA-205 Managerial Economics-II

The students will be able to:

CO1: By studying this subject, students understand the nature and scope of macroeconomics.

CO2: They learn about the consumption function and the psychological law of consumption.

CO3: Students study about investment and its types.

CO4: Students learn about national income and the methods of its measurement and limitations, etc.

Semester-III Paper: BBA-303 Statistics for Business

Students will be able to:

CO1: Demonstrate the role, scope, and functions of statistics in the field of business/industry.

CO2: Illustrate matrix operations, determinants, minors, cofactors, inverse of a matrix, matrix method, Cramer's rule to solve systems of equations, and rank of a matrix.

CO3: Understand basic statistical concepts such as data collection, classification, statistical series, tabular, diagrammatic, and graphical representation of data.

CO4: Describe the concept of statistical averages, use and apply measures of central tendency, dispersion, skewness, and kurtosis.

CO5: Grasp the concept of correlation, analyze and interpret covariance and correlation coefficient.

CO6: Use regression analysis to analyze the underlying relationships between the variables and estimate regression coefficients.

CO7: Describe the components of time series, apply time series analysis in business scenario

B.voc in Financial Market & Services
Semester I
Paper: Statistical Applications for Finance

CO1:Understand and summarize complex data sets through graphs and numerical measures.

CO 2: Calculate estimates of parameters using fundamental statistical methods.

CO 3:Measure the "goodness" of an estimator by computing confidence intervals.

M.Com.

Semester-I
Paper:MC-102StatisticalAnalysisforBusiness

Studentswillbeableto:

CO1: understandprocessofcollectionofprimaryandsecondarydata, andtheirsources.

CO 2: develop understanding of various types of probability and non-probability sampling techniques,andtheimportance of randomization.

CO 3: understand and apply probability theory and theoretical probability distributions in business andresearch.

CO 4: have adequate knowledge about designing questionnaire, conducting pilot survey and pre testing ofquestionnaire.

CO 5: use sample statistics to test the hypothesis regarding population and estimate the populationparameters andtomakejudgmentsaboutthepopulationespeciallyinbusinesscontext.

CO 6: select appropriate statistical techniques for summarizing, displaying, analysing and interpretingbusinessdata.

Semester-I

Paper:MC-101ManagerialEconomics

CO 1:By studying this subject, students know about nature and scope of managerial economics.

CO2:TheystudyaboutcostandRevenue curves.

CO 3:Students study about utility analysis, ordinal analysis and revealed preference analysis.

CO4:Students arebenefittedbystudyingaboutdifferentmarket forms.

CO5:Theylearn about consumption, Nationalincomeandinflation, CPI,WPIetc.

Semester-II

Paper:MC-203ResearchMethodology

Studentswillbeableto:

CO1:criticallyassessandselectappropriateresearchproblem,designandresearchprocesstoachieveresearch objective.

CO2: assesscriticallyvariousmethodslikeliteraturestudy,casestudy,structuredsurveys,indepthinter-views,focus groupinterviews.

CO3: have adequate knowledge on types of scales as well as measurement and scaling techniques.

CO4: understand processofcollection, processing, editingofdata.

M.Sc. (Fashion Designing)

Semester-III

Paper:ResearchMethodology

Studentswillbeableto:

CO1:understand a general definition of research design.

CO2:know why educational research is undertaken, and the beneficiaries that gain from research studies.

CO3:identify the overall process of designing a research study from its inception to its report.

CO4:be familiar with ethical issues in educational research.

CO5:know the primary characteristics of quantitative research and qualitative research.

Department of Psychology

B.A. (Bachelor of Arts) Semester-I & II Paper: Psychology

CO1: The students will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

CO2: They will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.

CO3: Students will respect and use critical and creative thinking, skeptical inquiry, and the scientific approach to solve problems related to behavior and mental processes.

CO4:They will also understand and apply psychological principles to personal, social, and organizational issues. Additionally, students will be able to weigh evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a discipline.

CO5:They will recognize, understand, and respect the complexity of sociocultural and international diversity.

Semester-III & IV Paper: Experimental Psychology

CO1:Students will have the opportunity to develop a deep understanding and broad knowledge of the general theoretical and scientific principles of psychology.

CO2;They will acquire in-depth knowledge in specialized areas of their subject. Additionally, they will have the opportunity to acquire and demonstrate bibliographic skills to search out information appropriate to a particular topic.

CO3:Students will gain experience in compiling written reviews of key topics in psychology, where they are expected to have knowledge, depth of understanding, and a critical appreciation of the strengths and weaknesses of theoretical claims, research evidence, or conceptual arguments. CO4: Furthermore, they will have the opportunity to discuss in detail aspects of research or enquiry.

Semester-V & VI Paper: Abnormal Psychology

 Upon successful completion, students will have the knowledge and skills to:

CO1: Identify and describe major terms and concepts in abnormal psychology.

CO2: Describe and apply major theories of abnormal psychology.

CO3: Describe the symptomatology associated with major mental disorders and apply it to case examples.

CO4: Think critically about issues and changes in psychiatric nomenclature.

CO5: Think critically about ethical, legal, cultural, and contemporary topics in abnormal psychology.

CO6: Demonstrate preliminary knowledge of the main empirically based approaches available to treat or manage the conditions covered in the course.

Department of Political Science

B.A. (BachelorofArts)
Semester I: Principles of Political Science

CO1: Understanding the modern and traditional viewpoints of the normative and realistic approach.

CO2: Exploring the relationship of Political Science with other subjects like Economics, History, Sociology, and Psychology.

CO3: Discussing the origin of the state and its elements.

CO4: Analyzing the social contract theories of Hobbes, Locke, and Rousseau, as well as evolutionary theories and different views of the state (liberal, Marxist, and Gandhian).

CO5: Studying welfare states and analyzing electorates and electoral systems.

Semester II: Modern Political Theory

CO1: Understanding political systems, their meaning, characteristics, functions, and political culture.

CO2: Examining rights and duties, including the Universal Declaration of Human Rights.

CO3: Exploring environmental protection issues and efforts at national and international levels.

CO4: Studying concepts of liberty, justice, equality, and democracy.

Semester III: Indian Constitution

CO1: Understanding the making of the Indian Constitution.

CO2: Examining Indian federalism through Centre-state relations.

CO3: Evaluating the structures of government at the national level.

CO4: Evaluating the structures of government at the state level.

CO5: Describing the salient features of the Indian Constitution.

CO6: Explaining different ways of acquiring Indian citizenship.

CO7: Listing the Fundamental Rights and Fundamental Duties of Indian citizens.

Semester IV: Indian Political System

CO1: Examining the role of political parties in Indian democracy.

CO2: Studying the Election Commission and the electoral process in India.

CO3: Analyzing the interaction between society and politics in contemporary India (Caste, tribe, and religion).

CO4: Creating awareness about social movements and empowerment related to women.

Semester V: Comparative Political Systems (UK & USA)

CO1: Discussing the theory applythemethodologyofcomparativeanalysiswithinthedisciplineofpoliticalscience.

CO2: Analyzecontemporaryproblemsinthecountriesunderconsiderationin-lightoftheconceptualframeworks presented in class.

CO3: Writeananalysisoftheinstitutions,politicalbehaviourandpoliticalideasofanothercountrycomparingthese attributes to the U.S.and U.K model.

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Semester VI: International Politics: Theory and Practice

CO1: Demonstrating an understanding ofKey historical events that shaped the international system in the 20th century.Basic structures of the contemporary international system.Key actors and institutions and their functions.

CO2: Describing the role of individual and cultural values and perceptions in analyzing international problems, emphasizing the importance of empirical evidence.

M.A. Political ScienceSemester-I

PaperI:WesternPoliticalThought-I

CO1:TounderstandSocialandPoliticalConditionsofGreekCityStates,theoryofJusticeCommunism,Educationandtheoryof Philosopher KingbyPlato.

CO2:TounderstandMachiavelli:SeparationofEthicsfromPoliticsstatecraftandHobbesviewsonhumannatureand StateofNature

CO3:TodiscussLocketheorystateofnature,NaturalRightspossessiveindividualismandSocialContracttheory

CO4:   To understandRousseau:humannatureandstateofnatureandsocialcontracttheoryofGeneral Will

Paper II: International Politics

CO1: Explaining the scope and subject matter of International Relations as an autonomous academic discipline. Studying the role of Diplomacy, Propaganda, and Military capabilities in the making of foreign policy.

CO2: Describing certain basic concepts like Globalization in the contemporary world order. Discussing the Cold War phases and understanding the post-Cold War era. Analyzing developments in European ethno-nationalism since the 1990s.

Paper III: Indian Political System

CO1: Outlining the basic values and philosophy of the Indian Constitution as expressed in the Preamble.

CO2: Studying Fundamental Rights, Duties, and Directive Principles of State Policy.

CO3: Examining Indian federalism through Centre-state relations.

CO4: Evaluating the structures of government at the national level.

CO5: Evaluating the structures of government at the state level.

CO6: Assessing Judicial Activism in India with particular reference to the Supreme Court.

Paper IV: Principles of Public Administration

CO1: Understanding the significance of Public Administration and the ecology of Public Administration, including New Public Administration.

CO2: Studying the theories of Scientific Management (Taylor), Bureaucratic Theory of Organization (Weber), Human Relations (Elton Mayo), and Herbert Simon's Decision-Making Approach.

CO3: Acquiring knowledge about principles of hierarchy, unity of command, span of control, delegation, and recruitment.

CO4: Exploring the concept of budget and performance budgeting, as well as the functions of LokPal and LokAyukta.

Paper V: Political Sociology

CO1: Studying the concepts of Power, Authority, and Legitimacy in the context of society.

CO2: Examining the meaning, nature, and scope of Political Sociology.

CO3: Conducting a comparative study of Political Science, Sociology, and Political Sociology.

CO4: Analyzing social stratification through the index of class, caste, and elite.

CO5: Establishing the state-society interrelationship.

CO6: Discussing approaches to the study of Political Culture and evaluating the different agents of Political Socialization and their interrelationships.

CO7: Evaluating the concept of Political Development and Social Change, with a focus on the role of tradition and modernity.

Semester-II
Paper VI: Western Political Thought-II
CO1: Examining Bentham's theory of utilitarianism.
CO2: Understanding John Stuart Mill's theory of "On Liberty" and the workings of the representative government system.
CO3: Exploring Hegel's theory of dialectical and historical materialism.
CO4: Acquiring knowledge of Marx's dialectical and historical materialism, class struggle, and the theory of surplus value.
Paper VII: Modern Political Analysis
CO1: Analyzing what modern political analysis is and explaining the approaches to the study of politics (normative, behavioral, post-behavioral, and system).
CO2: Assessing empirical modern political theory, including system analysis and structural functionalism.

CO3: Explaining dialectical materialism and historical materialism, with special reference to the relationship between base and superstructure, while analyzing political development and modernization.

Paper VIII: Comparative Political Systems: UK, USA, and France

CO1: Discussing the theory and applying the methodology of comparative analysis within the discipline of political science. Analyzing contemporary problems in the countries under consideration based on the conceptual frameworks presented in class.

CO2: Writing an analysis of the institutions, political behavior, and political ideas of another country, comparing these attributes to the U.S., U.K., and France models.

Paper IX: Issues and Trends in Indian Politics

CO1: Explaining different theories from the point of view of Indian political perspective.

CO2: Studying the process of interaction between society and politics in contemporary India, focusing on caste, tribe, and religion.

CO3: Providing a detailed explanation of coalition government and analyzing Dalit politics.

CO4: Considering the socio-economic system conditioning Indian democracy.

PaperX:PublicPolicy

CO1:Knowledge about features of public policy and five types of public policy (Substantive, Regulatory, Distributive, and Redistributive policies).

CO2:To understand policy analysis and policy making in India using different methods and techniques for policy analysis.

CO3:Studying three types of models: Lindbloom's incremental model, Herbert Simon's decision-making model, and Dror's Normative optimum model.

CO4:To understand the role of the executive, legislature, judiciary, political parties, pressure groups, mass media, and social movements in policy implementation.

CO5:To understand the conditions necessary for successful policy implementation.

Semester-III

Paper XI: Politics of International Economic Relations

CO1: This study is based on the assumption that in order to understand patterns of interaction and change at the global level, we need to look at both international politics and economics in an integrated manner.

CO2: Analyze the economic issues of trade, finance, production, and development from the perspective of International Relations concepts, ideas, and literature.

CO3: The objective is to address the political problems that arise as a consequence of the increasing density of international economic relations.

CO5: Knowledge of economics is an advantage but not a requirement.

Paper XII: Foreign Policy of India

CO1: To understand the determinants (internal, historical, physical setting, economic, and ideological) and basic principles of Indian foreign policy.

CO2: To gain knowledge about India and its neighboring countries (Sri Lanka, Bangladesh, Nepal, Pakistan, etc.).

CO3: Studying the major powers: US, China.

CO4: India's approach towards the restructuring of the UN.

CO5: To understand India's Nuclear Policy.

CO6: The role of India in BRICS.

Paper XIII: International Law

CO1: This course identifies with "international law" and addresses traditional "public law" topics, such as the actions of states and interstate organizations, as well as "private international law" dealing with the regulation of persons or property.

CO2: Includes specialized courses on international topics such as human rights, environmental law, and investment law.

Paper XIV: International Organization

CO1: The course gives a thorough understanding of the core literature on international organizations.

CO2: Detailed knowledge of the United Nations.

CO3: Information regarding the United Nations Declaration on Human Rights.

CO4: Engage with this literature critically by developing their own argumentation.

CO5: Explain the main theoretical approaches and empirical issues in the study of international organizations.

CO6: Write clearly, effectively, and subtly about these issues.

Paper XV: Human Rights

CO1: Human rights as a branch of public international law, and relevant juridical mechanisms at global as well as regional levels, human rights as an object of study in history, philosophy, and the social sciences, as well as a practical reality in national and international politics.

CO2: Different forms of promoting and implementing human rights, domestically as well as on the international level.

CO3: Understanding the role of human rights in contemporary issues relating to terrorism, religion, ethnicity, gender, and development.

Semester-IV

Paper XVI: Recent Political Theory

CO1: Explaining the origin and decline of Political theory.

CO2: Understanding Gramsci and Max Weber viewpoints of state, civil society, and hegemony.

CO3: Explaining the different theories of democracy.

CO4: Assessing the concepts of positivism, neo-positivism, modernism, post-modernism, libertarianism.

Paper XVII: Indian Political Thought

CO1: Students are required to take Basic Concepts of Political Thought which addresses the enduring political theories and questions of political life and values.

CO2: Students get information about the theories and political views of Indian political thinkers.

Paper XVIII: Government and Politics in Punjab

CO1: To understand the Singh Sabha Movement in Punjab, Arya Samaj Movement, GhadarMovement, and Praja-Mandal Movement.

CO2: To analyze the Akali Morcha in Punjab.

CO3: Role of coalition politics in Punjab.

CO4: To examine the Sarkaria Commission in center-state relations.

CO5: Impact of Green Revolution in Punjab socio-political system.

CO6: To understand the dynamics of the party system in Punjab: Akali Dal, Congress-I, BJP, and its emerging trends in Punjab Politics.

Paper XIX: Research Methods in Social Science

CO1: To get the knowledge about the role of scientific methods in social sciences.

CO2: To understand the concepts of hypothesis.

CO3: To understand the selection and formulation of the research problem, research design, and sampling and sampling techniques.

CO4: To discuss different methods like survey, questionnaire, interview, observation, and document analysis.

Paper XX: Politics in South Asia

CO1: Familiarity with critical debates regarding the colonial and, especially, the postcolonial history, institutions, and political processes of South Asia.

CO2: Knowledge of specific institutions, events, and state actors involved in the politics, political economy, and political sociology of South Asia.

CO3: A critical understanding of specific debates regarding patterns of political, economic, social, and cultural change in South Asia, as well as an ability to test the ideas that lie behind these debates with empirical data.

DepartmentofMathematics

B.Sc. (Non-Medical)/ (Computer Science)/ (Economics)/ B.A.CourseOutcomes

Semester-I Paper I: Algebra

CO1: Algebra forms the basis for higher mathematics and helps students to apply mathematical results to more generalized concepts.

CO2: Students will learn how to deal with quadratic, bi-quadratic, and cubic equations.

CO3: Students will be able to solve linear equations in three or more variables.

Paper II: Calculus and Trigonometry

CO1: Learn the basic concepts of various functions like exponential functions, logarithmic functions, and trigonometric functions and their applications to problems in the real world.

CO2: Understand the concept of Limits, Continuity, Uniform Continuity, and Derivatives and different properties of these concepts.

CO3: Students will learn about functions of complex variables and their properties.

CO4: Students will be able to find sums of different trigonometric series.

Semester-II Paper I: Calculus and Differential Equations

CO1: Calculus will help students trace graphs of different functions and find their integrals.

CO2: Students will be able to relate different Trigonometric integrals using reduction formulae.

CO3: Students will be able to solve differential equations with constant and variable coefficients.

CO4: Students will learn to find maxima and minima, critical points, and inflexion points of functions and determine the concavity of curves.

Paper II: Calculus II

CO1: Introduction to the concepts of Limits, Continuity, and partial derivatives of functions of two variables and different properties of these concepts.

CO2: Students will learn to expand functions of two variables using Taylor's theorem.

CO3: Understand the concept of double and triple integrals, how to solve them, and their applications.

Semester-III Paper I: Analysis

CO1: Analysis will introduce the concepts of sequences, series, and their convergence and divergence. It will also introduce the concept of Riemann Integrals.

CO2: Students will learn to check the convergence and divergence of sequences using various tests.

CO3: Students will learn to check the convergence and divergence of series using various tests.

CO4: Students will be able to check whether the function is Riemann Integrable or not and find their numerical values.

CO5: Students will learn to deal with improper integrals, beta and gamma functions.

Paper II: Analytical Geometry

CO1: Enhance knowledge of straight lines, parabolas, ellipses, hyperbolas, and spheres.

CO2: Solve applied mathematics problems involving analytic geometry and conic sections.

CO3: Students will be able to identify different conics from the general equation of degree two.

Semester-IV Paper I: Statics and Vector Calculus

CO1: Students will know about the different kinds of forces acting on a body at rest and their properties.

CO2: Students will learn about coplanar forces, parallel forces, moments, Varignon's theorem of moments, couples, resultant of two coplanar couples, and equilibrium of two coplanar couples.

CO3: Students will learn about the center of gravity of different bodies.

CO4: Students will be able to differentiate vectors, understand gradient, divergence, and curl operators, line integrals, vector identity, vector integration, Gauss' Theorem, Green's Theorem, Stokes' Theorem, and solve problems based on them.

Paper II: Solid Geometry

CO1: In solid geometry, students will learn about the surfaces and solids in space like cones, cylinders, and prisms.

CO2: Students will be able to identify equations of cones and cylinders from a second-degree equation in three variables.

CO3: Students will learn how to find surfaces of revolution of different curves.

Semester-V Paper: Dynamics

CO1: Dynamics will help to understand the concept of speed, velocity, acceleration, and use these in solving problems.

CO2: Students will learn about Newton's Laws of Motion and their applications.

CO3: Students will learn about work, power, energy, and laws related to kinetic and potential energy.

CO4: Students will get to know about curvilinear motion of particles in a plane and projectiles.

Paper: Number Theory

CO1: It will enhance the concepts of divisibility, G.C.D, L.C.M, and basic properties of integers.

CO2: Students will be able to apply Euclid's Algorithm and backward substitution.

CO3: Students will be able to understand the definitions of congruences, residue classes, and their properties.

CO4: Students will learn about different number theoretic functions and their properties.

Semester-VI Paper: Linear Algebra

CO1: Linear Algebra will introduce the concept of Groups, Rings, and Fields, Vector Spaces, and Linear Transformations.

CO2: Students will learn about linear span, linear dependence, linear independence of vectors, linear combination of vectors, and basis of a vector space.

CO3: Students will be able to learn about linear transformation and algebra of linear transformations. They will also learn Rank-Nullity theorem and Matrix of a linear transformation.

Paper: Numerical Analysis

CO1: In Numerical Analysis, students will learn common numerical methods and how they are used to obtain approximate solutions to otherwise intractable mathematical problems.

CO2: Students will be able to drive numerical methods for various mathematical operations and tasks such as interpolation, differentiation, integration, and the solutions of linear and non-linear equations.

CO3: Students will be able to analyze and evaluate the accuracy of common numerical methods.

Department of Home Science

Semester-I

 Paper:

Family Resource Management & Hygiene

CO1: Students will acquire detailed knowledge of the importance of home science in daily life.

CO2: Students will be able to understand the principles of art in relation to interior decoration during planning of the house.

CO3: Students will come to know about the pathogenic diseases, mode of transmission, causes, and spread of various bacterial and viral diseases and can enlist their methods to control them.

CO4: Students will acquire knowledge and be able to analyze various methods used to maintain hygiene in daily life.

Semester-II

Paper: Family Resource Management and Physiology

CO1: Students will be able to understand the meaning and various aspects of home management.

CO2: Students will learn the structure and functioning of the circulatory, digestive, and reproductive system in the human body.

CO3: The students can categorize various methods acquired by the florists for long-term flower arrangement.

CO4: The students will know and learn to solve problems related to resources such as money and energy management.

Semester-III

Paper: Clothing Textiles–I (Theory)

CO1: Students will be able to understand the concept of equipment and supplies used in the clothing market.

CO2: Students will know about the manufacture and properties of various textile fibers.

CO3: The students will learn to record body measurements in order to develop various pattern-designing.

CO4: Students will be able to understand various methods used for printing and dyeing various fabrics.

Semester-IV

Paper: Clothing Textiles –II (Theory)

CO1: Students will be able to understand principles of designs such as harmony, balance, rhythm, and proportion.

CO2: The students can summarize the various methods used to store various kinds of garments like cotton, wool, and silk.

CO3: The students will be able to understand the concept of formation and processing of various types of yarn.

CO4: The students will learn to select suitable clothes for various

Semester-V

Paper: Foods and Nutrition & Child Development- I (Theory)

CO1: Students will develop a critical understanding of the fundamentals of various food components and their role in development.

CO2: The students can understand the role of various vitamins and minerals in various metabolic pathways.

CO3: Students are able to know about various factors and their importance in child development.

CO4: The students are able to understand the phenomenon of Metamorphosis, motor development from infancy to late childhood.

Semester-VI

Paper: Foods and Nutrition & Child Development- II (THEORY)

CO1: The students are able to describe various types of food adulteration used nowadays and methods to check them.

CO2: Students will learn planning of a balanced diet for middle-income groups and its implications in daily life.

CO3: Students will be able to define the concept of a balanced diet and classify food based on five/seven food groups.

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CO4: Students will be able to understand the structure and types of therapeutic diets in various health conditions.

Department of Fine Arts

Semester-I Paper: Fine Arts (Theory & Practical)

CO1: This paper aims to shape the delicate minds of the newcomers towards being sensitive, sensible with a critical bent and acquiring the basics of fine Arts through the "Indian Art History."

CO2: The paper provides an opportunity for the students to improve their creative skill with six limbs of Indian Painting (Shadanga).

CO3: The students will identify the techniques of Indian painting, and it will help to understand the application of Color, Texture, Light & Shade Perspective, Rhythm, and Balance & Harmony.

CO4: It will enable the students to understand the composition, Classical Mural tradition of Ajanta paintings & technique.

CO5: The students will identify & describe the emergence of the earliest Indus Valley Civilization in India.

CO6: The practical application enables the students to understand & apply creative writing of different styles, still life, and Collage making.

Semester-II Paper: Fine Arts (Theory & Practical)

CO1: The students will be acquainted with Mauryan Sculptures and Pillars - Sarnath, Rampurva, Parkham, and Didarganj through Indian History of Art.

CO2: The paper will enable the students to understand and analyze the Indian sculptures of Karle and Bhaja caves.

CO3: It will enable the students to know the location of a rich reservoir of Indian Art laying in different parts of the country like Sanchi Stupa, Amaravati Stupa, and Bharhut Stupa.

CO4: They will be able to analyze the Kushan period in Mathura Art and Gandhara Art.

CO5: The practical work outlined in the syllabus will help the students to study different types of still life objects and will impart knowledge to understand proportion, volume, texture, and light & shade.

CO6: It will enhance the student's ability for creative posters on social awareness.

Semester-III Paper: Fine Arts (Theory & Practical)

CO1: Paper will help the students to evaluate the consolidation of the Classical Gupta Sculpture of India - Mathura and Sarnath.

CO2: They can analyze Post-Classical Sculptures of Ellora, Elephanta, and Mahabalipuram.

CO3: The students will be able to analyze various Chola Bronzes Sculptures and their technique.

CO4: The course will enable them to have inter-comparison of 2-dimensional and 3-dimensional designs based on folk forms.

CO5: They will understand the head-study (Male/Female) through structure, volume, proportion, texture, light, and shade in Monochromatic Color Scheme.

Semester-IV Paper: Fine Arts (Theory & Practical)

CO1: They will be able to have the description of Early Indian Miniature Painting (Pala Paintings) related to Buddhism.

CO2: The students will understand and can enhance their knowledge to grasp the Western Indian Miniature Paintings (Jain Paintings) related to Jainism.

CO3: Students will acquire knowledge about Mughal Art (Painting) under Akbar and Jahangir.

CO4: Students will be able to classify Rajasthani Art (Painting) in Mewar, Bundi, and Kishangarh.

CO5: The paper will enable them to study the comparison between Kangra Art and Basholi Art

Semester-V
Paper:Fine Arts(Theory&Practical)
CO1: Thestudentswilllearntheskillfulartisticcreationbyusingtechniquesandmethodsappropriatetotheintendedresult.
CO2: TheywillconsidertheroleofartmakinginthelargersocialcontextrelatedtoCubismandSurrealism
CO3: StudentswilldevelopartisticautonomytoidentifyandfocusontheirideaofImpressionismandPost-Impressionism.
CO4: Theywilldevelopaworkingknowledgeandrelationshiptoarthistorycriticismandtheory.
Semester-VI

Paper:Fine Arts(Theory&Practical)

CO 1:   The students will evaluate the impact of British on Indianart with special reference toCompanySchoolof Art.

CO 2: It will help to enhance the knowledge of artistic creation and activity of Bengal School whichshowtheimpactofsocioculturalscenarioofBengalinlate 19thC. A.D.

CO 3:The students will learnt the different trends of creation in the artistic way in the contemporaryart of   EarlyandMid-20thC.A.D.withthehelpofartist'sworkslikeAmritaShergill,JaminiRoy,Sobha Singh, and M.F.Hussain.

Department of Commerce and Management

B.Com.
Semester-I
Paper:Financial AccountingBCG103

CO1: The   subject   willenablethestudentstocombinepracticalandtheoreticalknowledgeoffinancialaccounting.

CO2:   Theywillbeabletounderstandtheusesandusersofaccountinginformation.

CO3:   Theywillunderstandtheapplicabilityofaccountingconcepts,principlesandconventions.

CO4:   Theywilllearntorecordbasicfinancialtransactionsandpreparefinancialstatementsbyunderstandingdifferentcapitaland revenue items

CO5:The students will be able to prepare voyage accounts, departmental accounts, branch accounts,consignmentandjointventureaccountswhichcaterstotheaccountingneedsofvariousorganisations

Paper:BusinessOrganisationBCG104

CO1:Students will know about different forms of organization and comparison of different businessforms

CO2:Theywill be abletolearnthefunctioningofstockexchangesinIndia

CO3: Students will be made awareof social responsibilities of the business and businessethics.

CO4:It will provide them the knowledge about various trade associations working for betterment ofbusinessesin India

CO5: It also provide knowledge about government agencies that are helping entrepreneursandSSIs

Paper:Business CommunicationBCG105

CO1:The subject is a key to transform effective communication skills in students as the emphasis arelaid on eloquence of speech, erudition of writing, emphatic listening and expressiveness of bodylanguage.

CO2:In addition, students are taught how to communicate effectively inside an organization throughmemos,office orders, circulars andnotices.

CO3:They will also grasp to communicate effectively with external stakeholders via business letter,salesletters, employment letters,complaintandadjustmentletters.

CO4:In present era of competition in job market, this subject offers useful tips and strategies for clearcommunication and thus, assists in securing a good job coupled with carrier advancement infuture.

Semester-II

Paper: AdvanceFinancialAccountingBCG203

CO1: Providepracticalworkingknowledgeoftally-accountcreationanddataentry.

CO2: It will provide awareness about partnership deed and its practical implications and usage.

CO3: Studentswillbeabletoperformaccountingofsmallbusinessthroughsingleentrysystem.

CO4: Itwillexplaintostudentsaboutdifferentuseofdepreciationasameansofknowingtruevalue ofasset.

CO5:ItwillprovidethemskillsformaintenanceofPartnershipAccounts.

Paper:Commercial LawBCG204

CO1: This paper widens the knowledge of students regarding Contract Act, 1872 of India. Studentsmay learn about the formation of a valid contract and various legal formalities to form abusinesscontract.

CO2:Students also understand about their rights being a consumer of goods by studying ConsumerProtectionAct, 1986.

CO3: They will also become familiar of sales of goods –terms and conditions, rights of buyer and-selleretc. fromSales of Goods Act,1930.

CO4:Subject also helps them to develop understanding regarding formation of a limited liabilitypartnership, its registration process, rights &duties of working partners & winding up etc.fromLimitedLiabilityPartnership Act, 2008.

CO5: Studentsareable to seekknowledgeofvariousrelevantcasestudiesregardingallthe topics.

CO6:Students are enriched with their contractual rights and obligations after the deep study of thissubject.

Paper:Functional ManagementBCG206

CO1:Thesubjectfocusesonenhancingmanagerialefficiencybyteachingthestudentsobjectives,needs, principles andpracticesof management.

CO2:In addition, corporate social responsibilities and business ethics make the students aware thatthe business should preserve those policies and decisions which are desirable in terms ofobjectiveand values ofsocietytoprotecttheinterestofallthe stakeholders.

CO3:Studentsapprehendthedifferentfacetsofmanagementsuchaspersonnelmanagement,production management and marketing management which create deep understanding abouttheintricaciesof management.

CO4:Thissubjectalsoassiststhestudentstoadoptmanagementasprofessioninfuture.

Semester-III

Paper: CorporateAccountingBCG303

CO1:Thissubjectwillapprehendaccountingtreatment ofequitysharesandpreferenceshares.

CO2:Italso explainstheprocedureofissuingandredemptionofdebentures.

CO3:Theywillbeimpartedknowledgeforthepreparationoffinalaccountsoflimitedliabilitycompanies.

CO4:Explainsthetheoreticalandpracticalaspectsofaccountingtreatmentofamalgamationofcompanies& Internalreconstruction.

CO5:Provideknowledgeaboutpracticalaspectsofpreparationoffinalaccountsofbankingcompanies.

CO6:Toimpartpracticalknowledgerelatingtothepreparationoffinalaccountsofinsurancecompanies.

Paper: Company Law BCG304

CO1: Students will have knowledge about corporate laws, their provisions, and implications.

CO2: Students will have a deep understanding of the new Company Law amended in 2013 followed by new policies in the Act.

CO3: It develops exemplary knowledge of current trends, legislative & regulatory developments.

CO4: Students will learn about provisions related to listing requirements in recognized stock exchanges.

CO5: Provide an insight into resolutions, registration procedures.

Paper: Financial Management BCG305

CO1: The students will be able to understand both the theoretical & practical role of financial management in business corporations.

CO2: They would be able to understand the importance of risk within the context of financial decision-making.

CO3: The students will learn to analyze the different sources of finance and their cost.

CO4: The subject will make the students acquainted with deciding on optimal capital structure.

Paper: International Business BCG306

CO1: Students will be able to understand the basic concepts of international finance, marketing, and also the various environments in which international businesses operate.

CO2: This subject will give them an overview of the unique issues and challenges faced by firms involved in international activities.

CO3: Students will acquire deep knowledge of different theories and techniques of this business discipline.

CO4: They will be able to analyze the risks and opportunities dispensed for global businesses and develop a practical approach to frame effective strategies and take good business decisions.

CO5: They will be able to gauge the impact of legal and regulatory compliance on a firm's trade inventiveness.

Paper:BusinessEnvironmentBCG307

Semester I

B.Voc In Financial Market and Services

    CO1:   Defineandunderstandthebusinessenvironment.

    CO2:   Understandtheroleofsocio-culturalfactorsandpolitical–legalsystemontheconductofbusinessinthecountry.

    CO3:   Realizetheimportanceofmicroandmacroenvironmentonbusinessdecisions.

    CO4:   Understandhowanentityoperatesindifferentbusiness environment.

CO5:   Demonstrateanddevelopconceptualframeworkofbusiness environment.

Semester-IV

Semester-IV Paper: Goods and Service Tax BCG403

CO1: Students will learn about the constitutional aspects and implementation of GST in India.

CO2: They will be able to understand how to register under GST and eligibility for registration.

CO3: They will get knowledge about the concept of supply of goods and service and its various types.

CO4: Students will learn the steps of computation of GST and payment of GST.

CO5: They will learn about the various GST return forms used by the GST payers.

CO6: They will also be enabled to understand various concepts like GST portal, GST suvidha providers, and invoice uploading.

Paper: Industrial Law BCG404

CO1: Students will get equipped with the latest knowledge of laws relating to Industry in India.

CO2: They become aware of the Factory Act, 1948 by studying the provisions relating to health, safety & welfare of workers.

CO3: Students are provided the knowledge of the formation of trade unions, rights and duties of its members, and functioning of trade unions.

CO4: They will understand about the employee state insurance schemes and various benefits available to the workers like health and medical benefits provided by the government.

CO5: Learners also come to know about the causes and reconciliation of industrial disputes between employer and employee, among employees, and among employers. This is highly required for the smooth functioning of the business.

CO6: They also get knowledge about the workmen's rights under the Workmen Compensation Act, 1923 in India. They also come to know about the way compensation is given by the employers to their workmen in case of accidental injuries, occupational health diseases, etc.

Paper: Principles and Practices of Banking and Insurance BCG405

CO1: Know about the various banking institutions and banking products.

CO2: Understand the nature of regulation in the banking industry.

CO3: Awareness of various banking innovations after nationalization.

CO4: Gain the knowledge of insurance and various assurance products.

CO5: Understand the various elements of regulation and control in the insurance industry.

CO6: Understand the principles, provisions that govern the life and non-life insurance contracts.

Paper:Cost AccountingBCG-406
CO1: It will make the students aware about various elements of cost.
CO2: Studentswilllearnvariousmethodsofcosting.
CO3: Itwill developtheunderstandingrelatingtooverheadcostanditsclassificationallocation.
CO4: Theconcept activity-based accountingwillalsobediscussed.
CO5:Studentswillalsogainknowledgeaboutcostcontrolmethodslikemarginalcosting,budgetarycontrol, standardcostingand break-even analysis.

Semester-V
Paper:Management AccountingBCG503
CO1: Knowingabout management accountinganditsobjectives.
CO2: It will help the students to understand the ways to make financial analysis.
CO3: Explainusesofratiosforanalysingtheprofitsandpositionofthebusiness.
CO4: Studentswillbeabletounderstandthe concept of responsibilityaccounting

Paper: Direct TaxLaw
BCG504/B.Voc Financial market and Services
CO1: ThesubjectwillexplaintheconceptofIndianIncomeTaxsystem
CO2: Itwillalsodevelopthepracticalskillcomputationtotaxableincomeundervariousheadslike; -salaries, house property,businessandprofession.
CO3: Studentswilllearnvariousdeductionsthatareallowedfromtaxableincome.

CO4: Itwillalsoconceptuallyclarifytheresidentialstatusandtaxliabilityofanindividual,firm,companyor a cooperative society.

Paper: AuditingBCG505

CO 1: The students will get knowledge about the concept and principles of Auditing, audit processandassurancestandardsandneedforanindependentorexternalaudit.

CO 2: They will learn about the various duties, responsibilities, rights and liabilities of auditors inregardto auditing.

CO 3:They will be able to understand the meaning of concepts that are fundamental to auditing andassuranceservicessuchasindependence,evidence,risk,materiality, Internalchecketc.

CO 4: They will be capable to describe the processes involved in auditing as well as various audittests and other assurance services and distinguishes between compliance and substantivetesting

CO 5: They will understand the content and importance of the audit reports provided at the end ofthe audit or assurance service and discusses the issue of legal liability arising from audits andotherassuranceservices

Paper: ContemporaryAccountingBCG511

CO1: Students will beabletounderstandvariouscontemporaryissuesinaccounting.

CO 2:They will learn about price level accounting, human resource accounting and corporate socialreporting.

CO 3:They will get knowledge about recent trends in published accounts of companies.

CO4:Theywill be abletounderstandvariousaccountingstandardsusedin India.

Paper:FinancialMarketOperationsBCG512

CO1: Students will learn about all markets in which securities are traded.

CO2: Students will learn about new innovative securities, e.g., derivatives and their types such as futures, options, swaps, and forwards.

CO3: All stock exchange information, mechanism, and its application are explained in detail.

CO4: Institutional framework and their knowledge are also imparted to students, e.g., SEBI, IFCI, IDBI, SIDBI, EXIM, NABARD, etc.

CO5: The students will be given information regarding the Depositories Act, 1996, and other related laws.

CO6: Students learn to deal with the corporate sector, stock exchanges, and its intermediaries.

Paper: Banking Service Management BCG521

CO1: Students will be able to understand the concept of banking, its structure, key players, and functions of banks.

CO2: The students will understand the lending process of banks, various lending products, and types of lending.

CO3: Developing knowledge of financial products and designing tailor-made products to meet a client's requirements and communicating the same to clients.

Paper: Insurance Service Management BCG522

CO1: Students will be able to learn about the documentation procedure involved in applying for insurance.

CO2: They will be able to understand the role and code of conduct for insurance agents and surveyors.

CO3: This subject will give them practical training to learn about the computation of premiums and bonuses.

CO4: They will get guidance regarding the procedure of claim settlement.

CO5: They will have a deep insight into the impact of taxation, competition, and regulation on the pricing of insurance products.

Paper: Computer-Based Accounting BCG531

CO1: Students will learn about the role of computers in accounting and business.

CO2: They will get information about various types of accounting software used by business entities.

CO3: They will learn the steps to install Tally in their computers and how to use this accounting software.

CO4: Students will be practically trained about the use of Tally in the maintenance of accounts of the firms.

CO5: They will learn how to retrieve the financial statements of a firm in Tally and how to analyze the same.

Paper: E-Commerce BCG532

CO1: The students will have a comprehensive understanding of E-Commerce, current and emerging business models, and the technology and infrastructure underpinnings of the business.

CO2: They will understand how innovative use of E-Commerce can help in developing competitive advantage.

CO3: They will be able to understand how the internet can help businesses grow.

CO4: Students will have an understanding of technical fundamentals required for E-Commerce.

CO5: They will understand the E-Commerce marketing concepts and communications.

CO6: An understanding of the importance of security, privacy, and ethical issues as they relate to E-Commerce.

Semester VI

Paper: Operations Research BCG603

CO1: The students will get knowledge of the basics of Operations Research, its meaning, characteristics, scope, and limitations.

CO2: They will be able to formulate and solve Linear Programming problems using appropriate methods.

CO3: They will have an understanding to solve the problem of transporting the products from origin to destination with the least transportation cost.

CO4: They will become acquainted with methods to solve assignment problems and traveling salesman problems.

CO5: They will learn to solve Queuing model I - single-channel poison arrivals with exponential service times.

CO6: They will have in-depth knowledge about the concept of game theory, its application, and various methods to solve it.

Paper: Corporate Governance BCH 604

CO1: Students will be able to develop the skills to build good leaders while following business ethics.

CO2: They will be made aware of whistleblowing - which can help in protection while they enter the corporate world.

CO3: They will get an overview of the ways adopted by corporations to curb insider trading.

CO4: Analysis of various scandals will enable the students to understand their causes.

CO5: The students will study the recommendations of various committees - which depict the evolution of corporate governance.

CO6: They will understand the concept of credit rating, functions of rating agencies, procedural formalities, and advantages for corporations.

Paper: Workshop on Basics of Stock Exchange BCG605

CO1: Students will be able to understand the basics of investment and the difference between investment, speculation, and gambling.

CO2: Students will have an understanding of various investment alternatives such as bank deposits, post office savings schemes, equity shares, preference shares, and debentures.

CO3: They will understand the exchanges in India such as NSE, BSE, MCX.

CO4: They will get to know the depository system in India, its importance, dematerialization, and rematerialization, and the procedural formalities involved in opening a demat account.

CO5: The different types of orders and margins will be explained to the students. Students will have a thorough understanding of the trading at stock exchange.

CO6: The paper will enable the students to have an understanding of the fundamental and technical analysis of the companies.

Paper: Portfolio Management BCG-611/B.VocIn Financial Market and Services Sem VI

CO1: The students will learn to develop the relationship between risks and return measures for a portfolio of assets.

CO2: They will get thorough knowledge regarding efficient portfolios.

CO3: They will understand how savings and investment are formulated and disbursed among various assets.

CO4: Students will understand various models like CAPM, Markowitz Model, and Sharpe's Model which are used to determine efficient portfolios.

CO5: They will study different investment strategies which help in decision making

.

Paper: Financial Services BCG612/B.VocIn Financial Market and Services Sem VI

CO1: The paper will enable the students to gain insight into the functioning, role, and structure of financial institutions in the Indian Economy.

CO2: They will acquire adequate information about the roles of intermediaries and its regulating bodies.

CO3: Students will understand the operations, role, functioning, and regulatory guidelines regarding Merchant Banking.

CO4: They will understand the basic concepts of mutual funds, the types, and working of the mutual funds industry.

CO5: They will get in-depth knowledge of the mechanism underlying financial services like leasing and venture capital.

CO6: The students will be acquainted with factoring services available in India and the Securitization Act.

CO7: They will become aware of the actual scenario of various financial services, including the recent developments in Plastic money, impediments to the growth of these services, and the future scope of these services.

Paper: Foreign Exchange Management BCG621

CO1: Students will be able to identify foreign exchange risk management and the techniques available to business operators for various risk exposures.

CO2: They will learn the various methods of currency forecasting.

CO3: The paper will help the students to examine the organization of the forex market, the spot market, and the forward market.

CO4: Learn how the information collected from the market can be used by business operators in controlling and managing foreign exchange.

CO5: Identify operational difficulties in financing and settling foreign currency.

Paper: Risk Management and Insurance BCG622/B.VocIn Financial Market and Services Sem VI

CO1: Students will be able to learn about the concept of risk and design a risk management program for a business organization.

CO2: It will help them to know about insurance contracts and its provisions, and the basic features of property-liability insurance, life, and health insurance.

CO3: Students will be able to compare and contrast the role of insurance intermediaries.

CO4: They will obtain knowledge about different retirement and annuities plans for employees.

CO5: They will understand the regulatory provisions of the insurance sector and also the need for privatization of insurance business.

Paper: E-Marketing BCG632

CO1: Students will be able to analyze unique e-marketing issues and challenges.

CO2: They will be able to understand the use of various strategies such as search engine marketing, pay-per-click marketing, online advertising techniques, etc.

CO3: They will be able to frame an integrated and comprehensive e-marketing plan.

CO4: They will understand the need for managing customer satisfaction in the digital age.

CO5: The paper will help them evaluate various pricing strategies and implementation of a successful e-marketing mix.

Paper: Basic Accounting BBA 103

CO1: The paper enables students to understand the concept of bookkeeping and accounting.

CO2: Students will learn the different concepts and conventions of accounting.

CO3: The paper will explain the main elements of financial accounting information – assets, liabilities, revenue, expenses, financial statements, and their purposes.

CO4: It will help students in understanding the rules and principles of accounting for recording various business transactions.

CO5: They will learn to prepare final accounts of sole trading businesses and company form of organizations.

CO6: Students will be able to get knowledge about recent trends in reporting of financial statements.

Paper: Business Organisation and Systems BBA 104

CO1: Students will understand the main working aspects of organizations, not only from an economic point of view but also considering organizations as part of society.

CO2: They will be able to analyze the economic environment of organizations by means of the development of conceptual areas such as industry, human resources, and production.

CO3: Knowledge of a comprehensive glossary of economic terms widely used in the analysis and discussion of behavior organization.

CO4: Interpreting the meaning of the information emerging from the organization, particularly with respect to the economic environment.

Paper:Business CommunicationBBA107

CO1: Students will have thorough knowledge of business communication, its importance, purpose, process, and barriers to effective communication, basic models of communication, and the 7 Cs of effective communication.

CO2: They will be able to demonstrate a good understanding of effective organizational communication and its forms like formal and informal communication, internal and external communication.

CO3: They will become familiar with business etiquettes.

CO4: They will have knowledge and skills to prepare memos, circulars, notices, and office orders used for internal correspondence.

CO5: They will have an understanding of correspondence with banks, customers' correspondence, and secretarial correspondence.

CO6: They will be able to prepare resumes, job applications, and draft interview letters, call letters, and final appointment letters.

Paper: Business Laws BBA203

CO1: Effects of legal contracts binding through the Indian Contract Act.

CO2: Awareness about terms and conditions for the sale of goods.

CO3: Being aware of consumers following provisions of the Consumer Protection Act.

CO4: Use of negotiable instruments for entering into agreements.

CO5: Knowledge about cheques and their various types used in daily routine.

CO6: Clarity on various parties and conditions in the hire purchase agreements.

Paper: Principles of Management BBA204/B.Voc Financial Market - Sem III

CO1: Describe the meaning, definition, nature, scope, and importance of management.

CO2: Discuss Principles of management and Scientific Management.

CO3: Explain management technique: Management by Objective.

CO4: Discuss in detail the functions of Management, i.e., planning, organizing, authority, staffing, directing, and controlling.

CO5: Understand the concept of departmentation and its types in detail.

Paper: Computer-Based Accounting System BBA206

CO1: Students will learn about the maintenance of groups and accounts as well as about codification and hierarchy of accounts.

CO2: They will get information about various types of accounting software used by business entities.

CO3: They will learn about database designing through ER model and structured query language.

CO4: Students will be practically trained about the use of Tally in the maintenance of accounts of the firms.

CO5: They will learn how to view and analyze the financial statements of a firm in Tally.

Paper: Fundamentals of Banking BBA207

CO1: The understanding of basics of banking is essential for every student, especially for commerce stream, and this subject caters to this need.

CO2: The study of fundamentals of banking enriches students' knowledge in comprehending the structure of banking, its functions, and role in the economic development of a nation.

CO3: Credit creation, the role of the central bank, clearing house function, negotiable instrument, types of cheques, and passbook impart necessary and useful information possessing practical implications. Resultant, students dealing with banks in their daily life has become uncomplicated.

CO4: Students' knowledge in banking can also assist them to get jobs in the banking sector in the future

Semester-III

Paper:FundamentalsofHumanResourceManagementBBA304

CO1: DescribetheNature, Scope,ObjectivesandFunctionsofHumanResourceManagement.

CO2: ExplaintheconceptofHumanResourcePlanningrecruitmentandSelec-tionofHumanResource,TrainingandDevelopmentof Human Resource.

CO3: DiscussindetailEmployeeRetentionStrategies.

CO4: Measure the Methods and Techniques of Performance Appraisal.

CO5: AnalysetheMethodsofJob Evaluation.

Paper:FundamentalsofMarketingManagementBBA305

CO1:Marketing management benefits the students byenhancingtheirknowledgeandskillinperceiv-ingchallengesandthreatsofexternalmarketingenvironmentanddevelopingappropriate marketing strategiestoadaptwithit.

CO2:Further,throughpracticalexamples,learntocreatesuitableproduct,place,priceandpromotion mix for segmenting, targeting and positioning the market segment with the aim tosatisfyconsumers.

CO3:Besides, this subject ameliorates studentsability to understand intricacies of marketing.

Paper:IndianFinancialSystemBBA306

CO 1: Students seek information regarding Securities Contract Act, SEBI, RBI and capital markets.

CO2:DifferentconceptualframeworkofIRDAAct&itsimplicationsisgrabbedbythestudents.

CO 3:TheinformationregardingFDI&FII'Sisprovidinganinsighttowardstheforeigncollaborations.

CO4:   Indian financial system & its overview is very important to study the economic impact.

CO5:   Theygain knowledge aboutmarketplayers.

Paper:Management AccountingBBA307

CO1: Explainhowmanagementaccountingplaysimportantroleinbusinessdecisionmaking.

CO2: Howmanagementaccountingcontributestofinancialreporting

CO3: Read,interpretandanalysefinancialstatementswiththevarioustoolsofman-agementaccountingtoassessthefinancialperformanceandpositionofa company.

CO4: Understand,defineandimplementmanagementcontrolsystemsandresponsibilityaccounting.

CO5: Developthefinancialreportsforeffectivecommunicationindecisionmakingprocess.

Semester-IV

Paper:Financial ManagementBBA403

CO1:The subject will familiarize the students with the functional areas and principles of financial-managementandtheywillacquiretheknowledgetomanagethefinanceandfinancialrequirementsin business.

CO2: Student will get knowledge about theories and factors affecting the capital structure of thebusi-nessandfinancialleveragetoformlong-termfinancialpolicies for business.

CO3:Theywillunderstandthecommonfactorsinfluencingdividendpolicyandthevarioustheoriesof divi-dend policy.

CO4: They will be capable to analyse the capital investment decisions and to identify relevant cash-flowsforcapitalbudgetingprojectsandapplyvariousmethodstoanalyse projects.

CO5: They will learn to apply techniques for estimating the cost of each component of the cost ofcapital

CO 6: They will know the concept of leverage and the benefits and costs associated with debtfinancing.

CO7:Thestudentswillrecognizethevariouslong-termandshort-termsourcesoffundsforabusinessfirm.

Paper:ProductionandOperationsManagementBBA 404

CO1: Familiarizewiththeconceptproductionandoperationsmanagement.

CO2: To understandthe new productdesignanddevelopment.

CO3: Thestudentswill beabletogetknowledgeaboutplantlocationandlayoutaswellasproductionschedulingtechniques.

CO4: Understandtheconcept,importance,factorsaffectingtheproductivityandmethodstoimprovethe same.

CO5: Toknowaboutqualityandtotalqualitymanagement.

Paper: Business Environment (BBA405)

CO1: Familiarize with the nature of business environment and its components.

CO2: Understand different environmental factors affecting the business climate.

CO3: Demonstrate and develop a conceptual framework of business environment, fostering interest in international business.

CO4: Understand ethics, their importance, and the role of ethical behavior in the business world.

CO5: Explore various environmental aspects such as political, technological, and economic factors.

CO6: Acquire in-depth knowledge about the legal environment.

Paper:Operations Research (BBA406)

CO1: Understand basic concepts, models, and statements of operations research theory.

CO2: Formulate and solve problems using networks and graphs to improve decision-making.

CO3: Construct linear programming models and discuss solution techniques.

CO4: Solve transportation models and assignment problems.

CO5: Use CPM (Critical Path Method) and PERT (Program Evaluation and Review Technique) techniques for project planning, scheduling, and control.

CO6: Propose optimal strategies using decision-making methods under uncertainty and game theory.

Paper:Fundamentals of Insurance (BBA407)

CO1: Understand the conceptual aspects and principles of insurance.

CO2: Recognize the relevance of insurance in the present scenario.

CO3: Familiarize with provisions of insurance acts (e.g., Insurance Act 1938, LIC Act 1956, GIC Act 1972, and IRDA 1999).

CO4: Evaluate different types of insurance options in real-life situations.

CO5: Learn about the role and code of conduct for insurance agents and insurance specialists.

Company Law (BBA503/B.Voc.):

CO1: Understand the legal regulation of companies by analyzing key characteristics of corporations.

CO2: Explore the structure, composition, and general duties of company boards and directors.

CO3: Gain knowledge about key company documents (e.g., MOA, AOA, prospectus) and their implications.

Paper:Entrepreneurship and Small Business (BBA504/B.Voc.)

CO1: Understand both the theoretical and practical role of entrepreneurship in the present business scenario.

CO2: Enhance entrepreneurial skills applicable in real-life situations.

CO3: Learn about the government's role in organizing entrepreneurial development programs.

CO4: Develop strategic planning abilities related to finance, production, marketing, and risk management.

CO5: Explore the contribution of commercial banks in promoting and servicing small businesses.

Paper:Cost Accounting (BBA505)

CO1: Raise awareness about various elements of cost.

CO2: Learn different methods of costing.

CO3: Understand overhead costs and their classification and allocation.

CO4: Introduce students to activity-based accounting.

CO5: Gain knowledge about cost control methods such as marginal costing, budgetary control, standard costing, and break-even analysis.

Consumer Behaviour (BBA511):

CO1: Identify major influences on consumer behavior.

CO2: Distinguish between different influences on consumer behavior and understand their relationships.

CO3: Recognize the relevance of consumer behavior theories and concepts in marketing decisions.

CO4: Implement appropriate combinations of theories and concepts.

CO5: Consider social and ethical implications of marketing actions on consumer behavior.

CO6: Apply the most suitable techniques to address market solutions.

Paper:Advertising and Sales Management (BBA512)

CO1: Demonstrate a clear understanding of major marketing concepts in written and oral communication using proper business techniques.

CO2: Develop an effective sales compensation plan.

CO3: Evaluate the performance of salespersons.

CO4: Organize sales territories to maximize selling effectiveness.

CO5: Evaluate sales and sales management strategies in relation to current legal and ethical standards of practice.

Semester-VI

Income Tax (BBA603)

CO1: Introduce students to the concept of the Indian Income Tax system and its scope.

CO2: Develop practical skills in computing taxable income under various heads (e.g., salaries, house property, business, and profession).

CO3: Learn about various deductions allowed from taxable income.

CO4: Conceptually clarify the residential status and tax liability of individuals, firms, companies, or cooperative societies.

CO5: Understand how to segregate and estimate agricultural income using examples.

Fundamentals of Capital Markets (BBA604)

CO1: Explain basic concepts about the capital market.

CO2: Classify the functions of the capital market.

CO3: Describe the components of the capital market.

CO4: Analyze various instruments in the capital market.

CO5: Study stock exchanges in India.

CO6: Explain various requirements for listing.

Service Marketing (BBA611)

CO1: Examine the nature of services and distinguish between products and services.

CO2: Identify the major elements needed to improve service marketing.

CO3: Explore service delivery gaps and strategies for their removal.

CO4: Develop an understanding of the roles of relationship marketing and customer service in adding value to the customer's perception of a service.

CO5: Appraise the nature and development of service marketing strategies.

CO6: Recognize how service marketing principles can be used as a conceptual framework to help managers identify and solve marketing problems.

CO7: Understand service blueprints and the process of service delivery.

E-Marketing (BBA612)

CO1: Recognize the importance of e-marketing in the current business environment and frame its objectives.

CO2: Evaluate different digital marketing tools such as SEO, SEM, PPC, social media, and blogs.

CO3: Acquire knowledge about segmentation, targeting, and positioning strategies, and create an e-marketing mix plan.

CO4: Compare and contrast different payment gateways.

CO5: Understand the scope of smartphone applications

M.Com

Semester-I

Management and Organisational Behaviour (MC 103):

CO1: Students explore the behavioral aspects of human beings by studying concepts related to personality, values, attitude, emotions, and moods.

CO2: Understand how to work effectively in groups and factors affecting group decision-making.

CO3: Gain insights into the consequences of stress and coping strategies.

CO4: Interpret the conceptualization of whistle-blowing and organizational citizen behavior.

CO5: Learn about the management technique known as Management by Objectives (MBO).

Business Environment (MC 104):

CO1: Provides information about the internal and external environment affecting any business organization.

CO2: Increases awareness of various government rules, regulations, and policies related to business.

CO3: Understands India's foreign trade policy in both past and current scenarios.

CO4: Knowledge about the balance of payment and balance of trade position of India.

CO5: Equipped with the latest amendments in the current budgets.

CO6: Provides data related to various economic policies and economic planning of India since inception.

CO7: Understands the limitations of various laws and suggests improvements for government policies.

Management Accounting and Control System (MC 105):

CO1: Evaluate the global context for managerial actions in planning, organizing, and controlling.

CO2: Assess the global situation, including opportunities and threats impacting organizational management.

CO3: Integrate principles into management practices.

CO4: Understand concepts related to business.

CO5: Demonstrate the roles, skills, and functions of management.

CO6: Analyze the effective application of subject knowledge to diagnose and solve organizational problems, developing optimal managerial decisions.

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Semester-II

Paper:CorporateFinancial AccountingandAuditingMC201

CO1:   Thissubjectwillapprehendaccountingtreatmentof Equitysharesandpreferenceshares.

CO2:   It also providesknowledgeaboutdetailedprocedureofissuingandredemptionofdebentures.

CO3:   Italsoimpartspracticalskillsforthepreparationoffinalaccountsoflimitedliabilitycompanies.

CO4:   Studentswilllearnvarioustheoreticalandpracticalaspectsofaccountingtreatment ofamalgamationofcompanies &internalreconstruction.

Paper:FinancialManagementMC 202

CO1:   Thispaperhelpsthelearnerstoknowaboutthevarioussourcesfromwhichfundscanberaisedin abusinessandtheways to usethesefundsinanoptimumway.

CO2:   Studentsareabletolearnfinancialplanningsoastobecomegoodfinancialmanagers.

CO 3: They can also understand about the framework of various projects which may help them intheirfuturecareer.

CO 4:   It is possible to do cost-benefit analysis of each project, evaluation of the proposals

Paper:MarketingManagementMC204

CO1:   Thestudentswillbeabletodeveloptheunderstandingofconceptofhumanresourcemanagement and its relevance in organisation.

CO2:   Theywillbeabletodemonstrateabasicunderstandingofdifferenttoolsusedinforecastingandplanninghuman resources needs.

CO3:   Theywillunderstandmeaningofrecruitmentandselection,itstechniquesandproblemsassociatedwiththem.

CO4:   Theywillbecomeacquaintedwithtraininganddevelopmentneeds,objectivesandvariousmethodsusedtotrainemployees.

Semester-III   69

Paper: Banking and Insurance Services (MC 301)

CO1: This paper provides essential knowledge about the functions, roles, and structure of banks within the banking system.

CO2: Students can stay informed about updates related to banks, including growth rates and new facilities offered to customers.

CO3: Understanding the role of banks in uplifting society, supporting women, small-scale industries, rural populations, and other vulnerable sections.

CO4: Students gain insights into loan facilities provided by banks, along with associated costs and repayment schedules.

Paper: Contemporary Accounting (MC 311)

CO1: Students explore various contemporary accounting topics.

CO2:The paper covers price level accounting and accounting for human resources.

CO3: Students learn about recent trends in published accounts of companies.

CO4: Understanding various accounting standards used in India.

CO5: The paper also discusses BASEL norms and value-added reporting.

Paper: Consumer Behaviour (MC 351)

CO1: This paper equips students with knowledge and skills to comprehend the dynamic nature of consumer behaviour. It also addresses the challenges faced by marketers and strategies to achieve success in this context.

CO2: Students become more aware and discerning while purchasing goods and services, learning how to behave as rational consumers in a complex marketplace.

CO3: Topics include motivation, perception, learning, attitude, lifestyle, family, reference groups, social class, and culture—all of which shape consumer behaviour. Suitable marketing strategies are emphasized to serve consumers effectively.

Paper: RetailManagementMC352
CO1: StudentswillattaintheInsightaboutretailsector.
CO2: Implementation of pricing strategies in own business.
CO3: Settingupandtradingthroughonlinewebsites.
CO4: Internal setuptoattractcustomersbylarge.

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CO5:   Impact oflocationwhilesettingupnewbusiness.

Semester-IV

Paper:International AccountingMC401

CO1:   Students will learnaboutinteractionbetweenaccountinganditsenvironment.

CO2:   Theywillgettheknowledgeabout international financialreporting.

CO3:   Theywilllearnhowtodointernationalfinancial analysis.

CO4:   Students will get the knowledge about financial reporting in US, UK, China, Japan and India

Paper:E-CommerceMC402

CO1:   Studentswillbeabletounderstandthegoalsofe-commerce,scopeofe-commerceanditsadvantage-sanddisadvantages

CO2:   Studentswillhaveanunderstandingof various businessmodelssuchasB2B,C2C,C2Bandwebsite asa marketplace.

CO3:   Theywillunderstandtheonlinepaymentmechanism,electronicpaymentsystem,paymentgateways and the tools forpromotingwebsites.

Paper:InternationalFinancialManagementMC411

CO1:   Studentswillbeabletounderstandtheforeignexchangesystem,internationalmonetarysystemand the European monetarysystem.

CO2:   Studentswillhaveanunderstandingofspotandforwardmarket,determinationofexchangerate,fac-torsaffectingcurrencyvalueandtheconceptofarbitrageand lawofoneprice.

CO3:   Theywillunderstandtheconceptofinterestateparitytheory,purchasingpowerparity,Fisher-effectandinternationalFisher effect.

Paper:FinancialMarketsandFinancial ServicesMC412/

B.Voc Financial market and services-Sem IV(Management of Financial Services and Institutions)

CO1:   Studentswillhaveknowledgeaboutfinancialstructureoftheeconomyasawhole.

CO2:   Theytendtofindoutdifferencebetweenvariousfinancialinstrumentstradableinthemarkets.

CO3:   LearntheconceptslikeCash Flows, Discounted Rates,&ValuationModelsetc.

CO4:   TheygainknowledgeaboutfinancialintermediarieslikeDiscounthouses,IssueHouses,Merchant Banks etc.

Paper: Corporate TaxLawandPlanning MC 413

CO1:   ThestudentswillbeabletoidentifythedifferencebetweenTaxplanning,TaxavoidanceandTaxeva-sion.

CO2:   Theywillbecomeacquaintedwithrulesregardingresidentialstatusofacompany.

CO3:   Thestudents will be abletocomputegrosstotalincomeofthecompanies.

CO4:   Thestudentswillabletodescribehowtheprovisionsinthecorporatetaxlawscanbeusedfortax   plan-ning.

DepartmentofComputerScience

BCA

Semester-I
Paper:II IntroductiontoProgramming-C

Paper: I Introduction to Programming Languages

CO 1: This paper provides the basic insight of programming skills to the students who are beginning their career in various Computer Programming Languages.

CO 2: C Programming acts as the base of programming languages which will thoroughly increase the interest of students in the programming field.

CO 3: All advanced computer programming languages are belonging to the base concept of C programming and learning the basic concept of this course will help students in advanced languages also.

CO 4: This language is being accepted as a universal programming language; therefore, the conceptual understanding of this language will inculcate thorough knowledge of procedures of programming language in students.

CO 5: This paper is specifically being used in a multitude of applications, including advanced scientific systems and operating systems.

Paper: II Introduction to Computers and Information Technology

CO 1: This paper provides fundamental information about computers and their working. A number of devices that can be attached with a machine nowadays are also discussed.

CO 2: Students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO 3: This paper includes Microsoft Office programs which enable the students to create professional and academic documents.

CO 4: Students also learn about various accounting-related operations in MS Excel and presentation skills using MS PowerPoint which makes them able to work in the field of office automation and desktop publishing as well.

Paper: III Applied and Discrete Mathematics

CO 1: This paper provides a deep insight about the mathematical foundational topics to students.

CO 2: Complete knowledge of Boolean Algebra is given through this course structure, so that students can prepare themselves for further understanding of topics related to other subjects of the program.

CO 3: This helps students in many competitive exams also as the base for reasoning, quantitative techniques, and graph theory as well.

Semester-II

Paper:IIntroductiontoProgramming-C++

CO1:This paper provides the expanded knowledge of C programming language and introduces theconcept of object oriented programming languages so that students can learn about the realtimeproblemsolvingtechniques.

CO2:Specializedcourseworkcanbeusedfordevelopingdifferentapplications,games,animations,webbrowser,compilersetc.,giving studentsalotofopportunitiesinIT industriesas well.

CO3: ExpansionofthispaperisbeingusedinsystemprogrammingandembeddedsystemsfortheestablishmentofComputerAidedDesignsandComputerAidedManufacturingpurposesalso.

CO4:ThisCourseimprovesthelevelofLogicalandAnalyticalThinkinginStudentssothattheycangivemoreemphasisonrealworldproblemsolvingtechniquesandmethods.

Paper:IIPrinciplesofDigitalElectronics

CO1:Thispaperallowsstudentstounderstandtheinternalcircuitryoftheprocessormemoryindetailexplainingaboutprocesscreation,performanceofvariouscalculations,numbersystem,numberconversions andK-Mappingtechniques.

CO2: Itenables students to get through the mathematical foundation going inside thesystemforthe bits transfer inside the processor, converting sum of product forms into product of sumforms,generatingtheread-writecyclesandmemorywritingtimingdiagrams.

CO3: Digital Electronics makes students learn about the internal mechanism of Arithmetic LogicalUnitinsidetheprocessorperformingvariouscalculationsand manipulations.

CO4: Learning Best Outcomes of this paper will motivate students to make their own hardware liveprojects.

CO5: Students can pursue their future in hardware engineering by having complete knowledge ofelectronics.

CO6: This programme will inculcates the complete knowledge of electricity and computer systemhandlingin students.

Paper:IIINumericalMethods&Statistical Techniques

CO1: This paper provides the learning insights of concept of statistical analysis of the data to thestudents so that they can effectively and efficiently store the data inside the systems where itwillbehavingalowcostandtimingaccesseasily.

CO2:In the field of computing, this paper will help the students to research and experiment aboutthe statistical details of the data and perform mathematical calculations of the data aswell.

CO3:This gives students complete knowledge to calculate various statistical calculations on datalikecalculatingMean, Median,Mode,Kurtosis, Moments andRegression.

CO4: This paper increases the critical and analytical strategies in students so that students canpursuetheircarrierinresearchanddevelopmentfield.

Semester-III

Paper:IComputerArchitecture

CO1: This paper provides the knowledge about the way the hardware components operate and areconnected together to form the computer system along with the deeper study of ComputerInternalCircuitry-Boardaswell.

CO2: Enhancestheknowledgeaboutthesystemcomponents,circuitdesign,logicaldesign,structure of instruction, computer arithmetic, processor control, assembly programmingandmethodsofperformance enhancement.

CO3: This paper is especially designed for the students to learn hardware details so that they canworkin the Field of Hardware Engineering and be able to develop Hardware Live Projectsalso.

Paper:IIDatabaseManagementSystem

CO1: This paper is very significant for the graduate students as it delivers detail understanding ofdatabasesystemsanditsdesign.

CO2: It is having big role in all types of industry/institutions because all kind of necessary data is tobestoredindatabase.

CO3: Thispaperalsodeliversthedesignandimplementationofdatabasesandgeneratesopportunity for students to become data managers, Data base administrators and get jobs inanykind of businesshouse.

Paper:IIIComputationalProblemSolving&StatisticalTechniques

CO1: Thispaperisspeciallydesignedforprovidingthethoroughknowledgeofprogrammingtostudents.

CO2: Goingfromthebasicstocompletedetailoftheprogrammingconcept,thispaperenablesstudentstoapplytheirownlogicsincomputersystem.

CO3: It is being widely used in various companies and MNCs, therefore the completeknowledgeofthispaperwillhelpstudentstogetthroughtheirtrainingprojectsafterplacements.

CO4: Studentscanbuilduptheirownsoftwareprojectsbyusingthesyntaxesandsemanticsofthisprogramme.

Semester-IV

Paper:IDataStructures&FileProcessing

CO1:This paper is one of the main and technical paper of BCA course after which students becomeabletoselectappropriatedatastructuresasappliedtospecifyproblemdefinition.

CO2: Studentslearnaboutapplicationofvariousdatastructurelikestacks,queues,tree,graph,linkedlist etc.relatedtodifferentoperations.

CO3: This paper is highly necessary to learn and implement logics in computer science.

CO4: It also includesthevariousconceptsrelatedtodatastorageincomputers.

Paper:IIInformationSystem

CO 1:This paper carries importance because information system management is a must for allindustries/institutionsbytheuseofinformationtechnology.

CO 2: This paper is best suitable for all the students who want to build their carrier in the systemanalyst,system designerandsystemmanagerasthesearespecialjobsfornewsystemdevelopmentanddesign.

CO3:Studentscanalsogetgoodopportunityinvariousbusinessverticalslikeaccountinginformationsystem,inventorymanagement,human resourcemanagementsystemetc.

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CO4: This paper isverysignificantinvariouslevelsofbusinesslikeTPS,MIS, DSSand ESS.

Paper:IIIInternetApplication

CO 1: This paper provides the understanding of various concepts related to internet where studentswill learn about the connection establishment, configuring the network, trouble shoot thenetworketc.

CO 2: Students learn about the various measures being used for securing the network along with thehelpof internet protocols and increaseintheuse various SecurityFirewalls

CO 3:Paper gives suitable information to students in order to get maximized advantages from thenetwork by implementing an accurate type of Topology and Connecting computer system inproper order.

CO 4: Students can pursue their carrier in the field of network security and network coordination-whichispresentlyin high demand throughouttheIndustry.

Paper:IVSystemSoftware

CO 1: This paper provides complete knowledge to the students about the process generation insidethe internal architecture of the systems and helps them to understand how the processing isbeingdonein-sidethesystem.

CO 2: Detailed insights about the Loader, Linker, Assembler and Compiler are given to the studentsby understanding which they candeterminewhattheactualworking is being performedinsidethesystemwhen we initiate command.

CO 3:Study of various phases of the Compiler makes students more enthusiastic to learn about theinter-nal process working of the system so that they can do specialization in the particularcourse

CO4:Students get to learn about the concept of macros, multi-threading and multiple processorientation-techniquesthroughthiscourse work

Semester-V

Paper:IComputerNetworks

CO1: Thispaperinculcatesthecompleteknowledgeofnetworkinginstudentswhichisthemostessentialand advantageousinthepresentscenarioofinternetandnetworking.

CO2: Complete understanding of the specified paper provides students with the information ofvarious-networktopologies,networkprotocols,networkessentialsandnetworkcontrolling.

CO3: ThisCoursewillhelpstudentstogetproperinformationaboutmanynetworkdevices

CO4:Studentswillthoroughlystudyaboutthetransmissionmediaandtore-alizeandcomparedifferentLAN,MANand WANtopologies.

Paper:IIWebTechnologies

CO1:Thispaperis highly efficientandrecommendedonefortheprovisionofknowledgetostudents about website development and software development which will highly increasetheiropportuni-tiestoworkinindustries.

CO 2: This course is the combination of many server side and client side programming languages-likeCSS, Java Script, Java Servlets, ASP.net and PHP for the successful establishment ofWebsiteorSoft-ware.

CO 3: Students will get through the internal knowledge of back-end and front-end processes us-ingwhichtheywillbeabletodesigntheirownwebsitesorsoftware.

CO4; This paper will also provide the information about the data base connectivity along withthegiv-enfrontendwebsiteorsoftwaresothatthestudentscanlearnaboutthedatatransferprocedures

Paper:III Operating System

CO 1: This paper explains and describes about the important computer system resources and the role of operating system in their management policies to get a better understanding about the concept of various Process Management Techniques under different operating systems available.

CO2: The paper gives detailed description about the process and functions of operating system in order to schedule manage and control the processes going inside the system.

CO3: The study of operating system helps students to analyse the memory management and its allocation policies which is the prime factor of consideration in every operating system,

CO 4: This course helps students to identify use and evaluate the storage management policies with respect to different storage management technologies of operating systems like Windows, Linux and UNIX.

Paper:IV JAVA Programming Language

CO 1: One of the most highly used and effective programming language JAVA, is the popular one IT sector for website and Software Development and this course give students a basic core and advanced technical information about JAVA Language.

CO2: Students get to learn about the basic concepts of object oriented programming and basic as well as advance Java Programming constructs.

CO3: This programme enables students to implement the constructs and structure of the Java Programming Language.

CO4: This programme is highly recommended for students in order to pursue career in software development in various MNCs in India and Abroad as well.

CO5: The Specialization of this will increase the opportunities for students to get jobs in the field of programming, website and software development, software testing etc.

Semester-VI

Paper:I Computer Graphics

CO1: This paper provides a detailed knowledge of Computer Screen and Audio Visual Aids to Students.

CO2: Students will get to know about the details of Image Resolution, Pixels, Bitmap and PixelMap which helps them to understand the process of Image Processing.

CO3: Computer Graphics is a kind of Programme that enables students to understand the working of CRT, LCD and LED Displays so that they can design the screen graphics according to it.

CO 4: This helps students to get through the techniques of creating many Graphical Scenes and Scenes with Motion also which greatly helps them to create different live projects and work under various MNCs.

Paper:II Software Engineering

CO 1: Software engineering calls upon interdisciplinary skills like critical thinking, cost analysis & project management—skills that can been enhanced in a master's program in computer science, computer engineering, information science or software engineering.

CO 2: This paper will help students to pursue their career in software engineering with a focus on new technologies and areas of application, such as cyber security, big data, or mobile application development etc.

CO3: This paper will develop a comprehensive understanding of programming, software architecture, and software testing which is in high demand in various MNCs and in vast IT Sector.

Paper:IVProject

CO 1: The project will enable students able to identify the requirements for the real world problemsand-correlatingthemwhichwillmakethemabletodevelopsoftwaresolutionsforthem.

CO 2: Project Modules make students learn logically and analytically so that they can pursue theircarri-erinthefieldofSoftware Development indifferentMNCsandindustries.

CO 3: The paper inculcates the importantsoftware developing skills in students to make them agood-Software Developer in order to make projects according to the need of customers andcompanies.

CO 4: This paper motivates students to work in teams and manage the conduct of the research studyin-nearfuture.

B.Sc. (IT)
Semester-I
PaperI-FundamentalsofComputers

CO 1:This paper provides fundamental information about computer and its working.

CO 2: Students become able to bridge the fundamental concept of computers with their present level-ofknowledgeaboutcomputers.

CO3:ThispaperincludesMicrosoftOfficeprogramswhichenablethestudent-stocreateprofessionalandacademic documents.

CO4:Students also learn about various accounting related operations in MS Excel and presentation-skillsusingMSPowerPointwhichmakesthemabletoworkinfieldofOfficeAutomationandDesktop Publish-ingaswell.

Paper:IIIntroductiontoProgramming-C

CO 1:This paper provides the basic insight of programming skills to the students who are beginningtheir-courseworkinvariouscomputerprogramminglanguages.

CO 2: C Programming acts as the base of programming languages which will thoroughly increasethe-interestof students inprogrammingfield.

CO 3:All advanced computer programming languages are belonging to the base concept of Cprogram-mingand learningthebasicconceptofthispaper,willhelpstudentsinadvancelanguages also.

CO 4:This Language is being accepted as Universal Programming Language, therefore the concep-tunderstandingofthislanguagewillinculcatethoroughknowledgeofproceduresofProgrammingLanguagein Students.

CO 5:This paper is specifically being used in a multitude of applications, including advancedscien-tificsystems and operatingsystems

Paper:IIIApplied&DiscreteMathematics

CO1: Thispaper provides adeepinsightaboutthemathematicalfoundationaltopicstostudents.

CO 2: Complete Knowledge of Boolean Algebra is given through this paper, so that students canprepare themselvesforfurtherunderstandingoftopicsrelatedtoothersubjectsofProgramme.

CO 3:This paper helps students in many competitive exams also as the base for reasoning andquantita-tivetechniquesandgraphtheoryas well.

Semester-II

Paper:I Principles of Digital Electronics

CO1: This paper allows students to understand the internal circuitry of the processor and memory in detail explaining about Process Creation, Performance of Various Calculation, NumberSystem, NumberConversions and K-Mapping Techniques.

CO 2: This paper enables students to get through the mathematical foundation going inside the system for the bit transfer inside the processor.

CO 3: Digital Electronics makes students learn about the Internal Mechanism of Arithmetic Logical Unit inside the Processor performing various calculations and manipulations.

CO 4: Learning Best Outcomes of this Paper will motivate students to make their own hardware Live-Projects.

CO 5: Students can pursue their future in Hardware Engineering by having complete knowledge of Electronics.

Paper:II Introduction to Programming-C++

CO 1: This paper provides the expanded knowledge of C Programming language and introduces the concept of object oriented programming languages so that students can learn about the realtime problem-solving techniques.

CO2: Specialized paper can be used for developing different applications, games, animations, web-browser, database software, compilers etc., giving students a lot of opportunities in IT Industries as well.

CO 3: Expansion of this paperwork is being used in system programming and embedded systems for the establishment of Computer Aided Designs and Computer Aided Manufacturing purposes also.

CO 4: This paper improves the level of Logical and Analytical Thinking in Students so that they can give more emphasis on real world problem solving techniques and methods.

CO 5: C++ inculcates all the required concepts, knowledgeable methodologies and structure oriented guidance in Students which motivates them to be a Good Programmer in future.

Paper:III Numerical Methods & Statistical Techniques

CO 1: This paper provides the learning insights of Concept of Statistical Analysis of the Data to the students so that they can effectively and efficiently store the data inside the systems where it will be having a low cost and timing access easily.

CO 2: In the field of Computing, this paperwork will help the students to research and experiment about the statistical details of the data and perform mathematical calculations of the data as well.

CO 3: This paper gives students complete knowledge to calculate various statistical calculations on Data like Calculating Mean, Median, Mode, Kurtosis, Moments and Regression.

CO 4: This paperwork increases the critical and analytical strategies in students so that students can pursue their carrier in Research and Development Field.

Semester-III

Paper:I Introduction to Python

CO 1: This paper is specially designed for providing the thorough knowledge of programming to students.

CO2: Going from the basics to complete detail of the programming concept, this programme enables students to apply their own logics in computer system.

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CO3:ThisprogrammeisbeingwidelyusedinvariouscompaniesandMNCs,thereforethecompleteknowledge of this programme will help students to get through their trainingprojectsafterplacements.

CO 4:Students can build up their own Software Projects by using the syntaxes and semantics of thisprogramme.

Paper:IIDataStructure

CO1:This paper is one of the main and technical papers of BSc. IT course after which studentsbecomeabletoselectappropriate datastructuresas applied tospecifyproblemdefinition.

CO2:Studentslearnaboutapplicationofvariousdatastructurelikestacks,queues,tree,graph,linkedlist etc.relatedtodifferentoperations.

CO3:   This paper is highly necessary to learn and implement logics in computer science.

Paper:IIISystemAnalysis&Design

CO1:   Thispaperisspecificallydesignedtogivetheknowledgeabouttheanalysinganddesigningproceduresof a systemsothatstudentscangothroughinside details.

CO2:   StudentscanworkasSystemAnalyserandSystemHandlersinvariouscompaniesandITindustry.

CO3:   Thispaperisveryeffectivelyprovidingstudentswiththeknowledgeof-variousconstructsandstructuresusefulinanalysingthe systemanddesignsasystemas well.

Semester-IV

Paper:IDatabaseManagement System

CO 1:This paper is very significant for the graduate students as it delivers detail understanding ofdatabasesystemsanditsdesign.

CO 2: It is having big role in all types of industry/institutions because all kind of necessary data is tobestoredindatabase.

CO 3:Thispaperalsodeliversthedesignandimplementationofdatabasesandgeneratesopportunity for students to become data managers, Data base administrators and get jobs inanykind of businesshouse.

Paper:IIInternetApplications

CO 1: This paper provides the understanding of various concepts related to Internet where studentswill learn about the Connection Establishment, configuring the network, trouble shoot thenetworketc.

CO 2:   Students learn about the various measures being used for securing the network along with thehelpof Internet Protocols andincreaseintheusevariousSecurityFirewalls

CO 3:Paper gives suitable information to students in order to get maximized advantages from thenetwork by implementing an accurate type of Topology and Connecting Computer System inproperOrder.

CO 4: Students can pursue their carrier in the field of Network Security

Paper:IIIJAVA&WebDesigning

CO 1:   One of the most highly used and effective programming language JAVA, is the popular oneITsector for website and software development and this give students a basic core andadvancedbothtypesoftechnicalinformationaboutJAVAlanguage.

CO 2: Students get to learn about the basic concepts of object oriented programming and basic aswellasadvanceJava Programming constructs.

CO3: This paper enables students to implement the constructs and structure of the Java Programming language in the successful creation of Java Applets and Java Servlets.

CO4: This paper is highly recommended for students in order to pursue career in software development in various MNCs in India and Abroad as well.

Paper: IV Web technology

CO1: This paper is highly efficient and recommended one for the provision of knowledge to students about website development and software development which will highly increase their opportunities to work in industries.

CO 2: This paper is the combination of many sever side and client side programming languages like CSS, Java Script, Java Services, ASP.net and PHP for the successful establishment of website or software

CO 3: Students will get through the internal knowledge of back-end and front-end processes using which they will be able to design their own websites or software.

CO 4: This will provide the information about the data base connectivity along with the given frontend-website or software so that the students can learn about the data transfer procedures form front-end to back-end and vice-versa.

Semester-V

Paper: I Computer Networks

CO1: This paper inculcates the complete knowledge of Networking in students which is the most essential and advantageous in the presents scenario of internet and networking.

CO2: Complete Understanding of the specified paper provides students with the information of various network topologies, network protocols, network essentials and network controlling.

Paper: II Operating System

CO 1: This paper explains and describes about the important computer system resources and the role of operating system in their management policies to get a better understanding about the concept of various process management techniques under different operating systems available.

CO 2: The paper gives detailed description about the process and functions of operating system in order to schedule manage and control the processes going inside the system.

CO 3: The study of operating system helps students to analyse the memory management and its allocation policies which is the prime factor of consideration in every operating system.

CO 4: This paper helps students to identify use and evaluate the storage management policies with respect to different storage management technologies of operating systems like Windows, Linux and UNIX.

Paper: III E-Business

CO1: This paper is one of the strong theoretical concepts regarding the online business.

CO2: This paper enables the students to clear the concept regarding traditional and online business concepts.

CO3: This paper helps students to understand the basics of the E-Business and techniques to handle business digitally in order to have productive outcome from the business.

Semester-VI
Paper: I Computer Graphics

CO1: ThispaperprovidesadetailedknowledgeofComputerScreenandAudioVisualAidstoStudents.

CO2: StudentswillgettoknowaboutthedetailsofImageResolution,Pixels,BitmapandPixelMapwhich-helps themtounderstandtheprocessofImageProcessing.

CO3:Computer Graphics is a kind of paper that enables students to understand the working ofCRT, LCDandLEDDisplays

CO 4: This paper helps students to get through the techniques of creating many Graphical Scenesand Scenes with Motion also which greatly helps them to create different live projects andworkundervari-ousMNCs.

Paper:IIIProject

CO 1: The Project will make Students able to identify the requirements for the real world problemsand-correlatingthemwhichwillmakethemable to developsoftwaresolutionsfor them.

CO 2: Project Modules make students learn logically and analytically so that they can pursue theircar-rierinthefieldof SoftwareDevelopment in differentMNCsand Industries.

CO 3: This paper inculcates the important software developing skills in students to make them agood Software Developer in order to make projects according to the need of customers andcompanies.

CO 4: This paper motivates students to work in teams and manage the conduct of the research studyin-nearfuture.

M.Sc.(ComputerScience)

Semester-I

Paper:MCS-101AdvancedDataStructure

CO1: Thispaperprovidesthestudentswiththedeepknowledgeofalgorithmdesignandanalysis

CO2: Thispaperalsoprovidesmeans formanagementoflargedatasetsuchasdatabasesorinternetindexings-ervicesbyallowingthedatause andprocessingonasoftwaresystem.

CO3: ManyreputedcompanieslikeAmazon,Microsofthirestudentsonthebasisoftheirpracticalk-nowledgein the data structures.

Paper:MCS-102AdvancedComputerArchitecture

CO 1:The study of computerarchitectureandorganizationfocusesontheinterfacebetweenhardwareand software, and emphasizes the structure and behaviour of the system thatprovideshardwaredetail-softhesystemtothestudents.

CO 2:This paper inculcates the hardware knowledge of processor in students and it is important that-computer students need a basic understanding of computer system itself in order to rectify theproblems.

CO 3:Thereareafundamentalrelationshipbetweenhardwareandthemanyas-pectsofprogrammingandsoftwarecomponentsincomputersystems.

Paper:MCS-103NetworkDesign&PerformanceAnalysis

CO 1:This paper provides students with the detail knowledge of networking concepts being highlyused in modern time's technologies. And it also provides shared access to customer andproduct databases in a verylesstime

CO 2:Networkprotocolanalysis isa networksniffertocapturedataforfurtheranalysisandunderstanding of the technical means necessary packets. Students can pursue their career inthe field of professional net-work developing which is highly in demand in India and Abroadaswell.

CO 3:Best understanding of networking concepts make students more confident about the business Startupsin field ofprofessionalnetworkingdevelopment.

CO 4: This paper will enable students to get best placements as Networking Professionals andNetwork-Developers in various companies.

Paper:MCS-104DiscreteStructures

CO 1:DiscreteStructures is of direct importance to the fields of Computer Science and InformationTechnology. This allows students to study areas such as set theory, logic, relations, graphtheoryandanalysisof algorithms.

CO 2:Modelingwith discrete mathematics is an extremely important problem solving skill in whichthestudentsperformcombinatorialanalysistosolvecountingproblemsandanalysealgorithms.

Paper:MCS-105SoftComputing

CO1: Thispaperhelpsto understand the basic knowledge ofprobability,fuzzylogicandneuralnetworksthatallowsstudentstohandleproblemswithimpreciseandincomplete data

- **CO2:** The paper inculcates the knowledge about the fuzzy logic toolbox and covers a wider range of operating conditions, more readily customizable in natural language terms.
- **CO4:** This paper provides understanding of various membership functions of fuzzy logic and use of fuzzy and neural for various real-world problems.
- **CO5:** This paper also provides understanding of the various types of neural networks and their algorithms.

Paper: Theory of Computation (MCS-201)

- **CO1:** Students understand the mathematical laws governing efficient computation and apply this understanding to address problems in other parts of computer science.
- **CO2:** This paper teaches students about the elementary ways in which a computer can be made to think. It provides good problem-solving skills and behind the logic of any compiler.
- **CO3:** In theory of computation, students will learn abstract machines, or model of computation, which will be defined mathematically.

Paper: Image Processing (MCS-203)

- **CO1:** This paper will provide students useful and essential skills and experience to make a career as creative professionals such as graphic designers, gallery managers, art curators, commissioning editors, and art directors, etc.
- **CO2:** Having knowledge about this paper, students will get to know about the detailed functions of image processing software so that students can learn about restoration, manipulation, and development of various imaging techniques.
- **CO3:** This paper provides knowledge to develop the layout and production design of newspapers, magazines, corporate reports, journals, and other publications.
- **CO4:** The advanced features of image processing are being used to develop motion pictures and motivate students to work in the television industry.

Paper: Design & Analysis of Algorithm (MCS-203)

- **CO1:** A Software programmer is responsible for designing, installing, testing, and maintaining software systems. A Software Programmer has to review current systems, present ideas for system improvements, work with analysts, product specifications, and write the program codes. This paper helps to inculcate all the major responsibilities of a software programmer in students so that they can compete in the market well.
- **CO2:** Students learn to design and develop many types of software like operating systems, network distribution, and software for compilers through this paper.
- **CO3:** Through this paper, students will learn to work in industries as software publishers, gaming companies, and government organizations. Students can also develop their own software projects independently.
- **CO4:** They can pursue the career of a Technical writer who prepares instruction manuals, journal articles, and other documents to communicate complex and technical information more easily.

Paper:MCS-204CloudComputing

CO 1:It provides a deep knowledge to students about virtualization.Cloud environment gives ourbusiness the ability to communicate and share more easily outside of the traditional methods.

CO 2:Through this subject students will learn about the different models used in cloud for serviceprovided.

CO 3: With the growing number of web-enabled devices used in today's business environment (e.g.Smart phones, tablets) access to our data is even easier. And the paper enables the students tounderstandandlearntheuseofinternetandcloudin various organizations.

CO 4:Moving to cloudcomputingmayreducethecostofmanagingandmaintainingyourITsystems.Students came toknowabouttheenergyefficiencyin cloud

Paper:MCS-205DistributedDatabaseSystem

- CO1: This specialized paper focuses on future design and implementation in the field of networking.

  CO2: It covers advanced development related to networking, including information storage and retrieval.

  CO3: Students gain insights into specialized networking techniques that ensure efficient processing of large information systems.

  CO4: The course also explores remote network and server processing, emphasizing data availability to users when needed.

  CO5: The scope of this paper extends to large networks, data warehousing, and data mining, making it a valuable choice for aspiring network administrators.

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Semester-III

Paper:MCS-301AdvancedSoftwareEngineering

CO 1: The Advanced Software Engineering is a newly redesigned course that enables students toextendtheirknowledgeof,andgainvaluableexperiencein,softwareengineeringasitappliesto anumberof-newandimportantareas of ITand computing.

CO2: Softwareengineersmaychoosetobecomeexpertsinasingleprogramming-languageortypeofdevelopment.

CO3: Havingknowledgeofthissubject,studentscanworkaswebdeveloper,softwareengineer,Mo-biledevelopment,Technicalstack(e.g., Python, Ruby) etc.

Paper:MCS-302SystemSoftware

CO 1: This paper provides complete knowledge to the students about the process generation insidethe internal architecture of the systems and helps them to understand how the processing isbeingdoneinsidethesystem.

CO 2:Detailed insights about the Loader, Linker, Assembler and Compiler are given to the student-sthrough this paper by understanding which they can determine what the actual working isbeingper-formedinsidethesystemwhen we initiate acommand.

CO 3:Study of various phases of the Compiler makes students more enthusiastic to learn about theinter-nal process working of the system so that they can do specialization in the particularcourseforhighereducation also.

CO 4:Students get to learn about the concept of Macros, Multi- Threading and Multiple ProcessOrien-tationtechniques through thiscourse work

Paper:MCS-303DataMining andWarehousing

CO 1:This paper provides knowledge about how data is integrated across enterprises and industries

CO2:Thispaperhelpsstudentsinsolvingwhat-ifanalysisandvariousminingtechniquestohandlethebusi-nessscenarios.

CO3: Thispaperworkinculcatesthecapabilityofdecisionmakingoncurren-tandhistoricaldataanditsimplementation

CO4: Thispapermakesitunderstand to thestudents how to manageandcontrol businesses andperform-miningon the requireddata.

Paper:MCS-304ConceptofCoreandAdvancedJAVA

CO1: ThispaperisoneofthespecializedProgrammeinM.Sc.,whichprovidesthedetailknowledgeofJa-vaProgrammingLanguage.

CO2: Studentsgettolearnaboutthebasicconceptsofobjectorientedprogram-mingandbasicaswellasadvanceJava Programming constructs.

CO3: This paperenablesstudentstoimplementapplicationsinJava&JavaApplets.

CO4: This paper is highly recommended for students in order to pursue career in softwaredevelopment.

CO5: Studentscangetmanyjobopportunitiesandusethislanguageasatoolinresearch.

Paper:MCS-305NetworkProgramming

CO1: Networkprogrammingwritesoftwareprogramsorscriptsthataidinnet-workanalysis,suchasdiagnostics or monitoringutilities.

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CO 2:This paper helps students to integrate new software technologies into an existing networkenvironmentorto build a new environment.

CO 3:Networktechniciansoftenworkthehelp-deskservicestorepairorupgradecomputers.Technicians need to be familiar with the different operating systems such as Microsoft,Novell,and UNIX, aswellasthebasics of computernetworking.

Semester-IV

Paper:MCS-401Advanced WebTechnologies

CO 1:Thissubjectprovidescombinationofmanylanguageswhichareusefulforstudentstodevelop web sites. ASP .NET significantly reduces the amount of code required for buildinglarge and complex applications which can increase overall development speed and reducedevelopmentcosts.

CO 2:ASP.NET isanopen-sourceserver-sidewebapplicationframeworkdesignedforwebdevelopment to produce dynamic web pages and by implementing CSS students came toknowaboutformatting.

CO3: This paper enables students to get through the inner functioning details of Asp.Netframework.Asp.Netframeworkislanguageindependent,meansstudentscanchooseanyprogramminglanguage which bestsuitedtoyouapplication.

CO4: Bydatabaseconnectivitystudentscametoknowhowtheinternalfunctionalityofawebsiteisconnected withbackend.

Paper:MCS-402MicroprocessorandItsApplication

CO 1:A microprocessor isnormallycapableofmanyfunctions,suchaswordprocessing,calculation,andcommunicationviaInternetortelephoneandthishelpsstudent-

stounderstandthedetailedviewofmicroprocessorabout theirfunctionalityandtheirproperties.

CO 2:Students can easily extend their knowledge of writing assembly code, for the x86 assemblylanguageandtheycanunderstandhowamachineinterpretsinstructionsatlowlevel.

CO 3:This paper provides knowledge how a processor at the lower level receives input from thekeyboards and the mice and they can learn how and why memory segmentation in a processcameintoexistence.

CO5: Thisalsoallowsstudentstounderstandaboutthereallifeapplicationsofthemicroprocessor.

Paper:MCS-403ObjectOrientedModeling,AnalysisandDesign

CO 1:OOADisoftenused in theareaofobjectorientedprogramming (OOP).OOPaimstoproducesoftwarethatisefficientlywrittenwithfewinstancesofduplicatedcode.

CO 2:Object-oriented analysis and design (OOAD) is a technological approach to analyse, design asoftwaresystemor business byusingObjectOriented(OO) concept.

CO 3: An efficient analysis is only possible when we think in a way where objects can be identified.Afteridentifying the objects the relationships between them are identified and finally thedesign is produced. It also provides learning of principles of relational, hierarchical andobject-orienteddatabases

CO 4: OOAD allows complete understanding about the current trends in data management, such asdataminingandbusiness analytics.

Paper:MCS-405PProject

CO 1: The Project will make Students able to identify the requirements for the real world problemsandcorrelatingthemwhichwillmakethemable to developsoftwaresolutionsfor them.

CO 2: Project Modules make students learn logically and analytically so that they can pursue theircarrierinthefieldofSoftwareDevelopmentindifferentMNCsandIndustries.

CO 3: paper inculcates the important software developing skills in students to make them agood Software Developer in order to make projects according to the need of customers andcompanies.

CO 4: This paper motivates students to work in teams and manage the conduct of the research studyinnearfuture.

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M.Sc.(InformationTechnology)

Semester-I

Paper:MIT-101AnalysisandDesignofEmbeddedSystem

CO1: EmbeddedSystemisdesignedtofunctionwithminimalornohumaninterference.Thiscourseexplainsembeddedsystemconceptsandarchitectureofembeddedsystems.

CO2: ThispaperalsodescribesthearchitectureofPIC,AVRandDSPmicrocontrollers.

CO3: Studentscanlearndifferenttypesofoperatingsystemsandtheirservicesusedrequiredfordesigningembedded systems.

CO4: Thispaperprovidestheknowledgeaboutthedesignissuesandelementsforanembeddedsystemsand toolsfordevelopmentofembeddedsystems.

Paper:MIT-102DistributedComputing

CO1: This paper is highly specialized in M.Sc. (IT) which elaborates the future design andimplementationinthefieldof networking.

CO2: Thispaperprovidesadvancedevelopmentinthefieldofnetworking,storingandfetchingofinformation.

CO3:Thishelpsinunderstandingandspecializednetworkingtechniqueswhichensuretheprocessingoflargeinformation systems withoutanyfailures.

CO4: Studentslearnaboutremotenetworkandserverprocessinginwhichdataisneverplacedinserverbut dataisavailabletouseras and when required.

CO5: Thisprogrammeishavinghugescopeinlargenetworks,datawarehousinganddatamining. Student'sgetsverygoodoptionforbecominggoodnetworkadministrator.

Paper:MIT-103AdvancedComputerOrganizationandArchitecture

CO 1:The study of computerarchitectureandorganizationfocusesontheinterfacebetweenhardware and software, and emphasizes the structure and behavior of the system that provideshardwaredetailsofthesystemto the students.

CO 2:This paper inculcates the hardware knowledge of processor in students and it is important thatcomputer students need a basic understanding of computer system itself in order to rectify theproblems.

CO   3:Thereareafundamentalrelationshipbetweenhardwareandthemanyaspectsofprogrammingandsoftwarecomponentsin computer systems.

Paper:MIT-104NetworkOperatingSystem

CO 1:This paper is one of the highly specialized programme in M.Sc., which provides the detailknowledgeofNetworkOperatingSystemspecificallyMicrosoftWindows Server.

CO 2:Students get to learn about the various concepts related to Network Operating System

likeUser/Group Management, Disk Quotas, Server Setup (WEB Server, DHCP, DNS etc.) inWindowsand Linux.

CO 3: This paper enables students to create and manage highly efficient networks using MicrosoftServer product.

CO 4:This paper is highly recommended for students as it gives them an insight into comparingWindows Server products and Linux Server Solution in order to implement network solutionsinorganizations.

CO 5:Students can get many job opportunities related to Network Administrator in variousindustries/organizations.

Paper:MIT-105ComputationalProblemSolvingUsingPython

CO 1: This paper is specially designed for providing the thorough knowledge of programming tostudents.

CO 2:Going from thebasicstocompletedetailoftheprogrammingconcept,thisprogrammeenablesstudentstoapplytheirownlogicsin computer system.

CO3: This paper is being widely used in various companies and MNCs, therefore the completeknowledgeofthisprogrammewillhelpstudentstogetthroughtheirtrainingprojectsafterplacements.

CO4: Studentscanbuilduptheirownsoftwareprojectsbyusingthesyntaxesandsemanticsofthisprogramme.

CO 5: The basic foundation of this particular programme will raise the interest of students in otherhighlevelprogramminglanguagestoaccomplishtheneedofbecomingasuccessfulSoftwareDeveloper

Semester-II

Paper:MIT-201MobileComputing

CO1: ThispaperprovidesadeepknowledgeaboutthedifferentwirelesscommunicationSystem.

CO2: ThroughthissubjectstudentcametoknowaboutthemobileradioPropagationsandhowachannelis allocatedto each subscriber.

CO3: TheGSMsystemfor mobile Computingisalsotaughtto students.

CO4:AcompletedescriptionofSMS(ShortMessageService)anditsarchitectureisgiventostudentsthrough this subject.

Paper:MIT-202DistributedDatabases

CO1: This paper ishighlyspecializedinM.Sc.(IT)whichelaboratethefuturedesignandimplementationinthefieldof networking.

CO2: Thispaperprovidesadvancedevelopmentinthefieldofnetworking,storingandfetchingofinformation.

CO3:Thishelpsinunderstandingandspecializednetworkingtechniqueswhichensuretheprocessingoflargeinformation systems withoutanyfailures.

CO4: Studentslearnaboutremotenetworkandserverprocessinginwhichdataisneverplacedinserverbut dataisavailabletouseras and when required.

CO5: Thispaperishavinghugescopeinlargenetworks,datawarehousinganddatamining.
Students'getsverygoodoptionforbecramingoodnetworkadministrator.

Paper:MIT-203 ImageProcessing

CO 1:This paper will provide students useful and essential skills and experience to make career increativeprofessionalssuchasgraphicdesigners,gallerymanagers,artcurators,commissioningeditorsand artdirectorsetc.

CO2: Havingknowledgeaboutthispaper,studentswillgettoknowaboutthedetailedfunctionsofimage processing software so that students can learn about restoration, manipulation anddevelopment of variousImagingtechniques.

CO3: This paperprovidesknowledgeto develop the layout and production designofnewspapers,magazines,corporatereports,journalsand other publications.

CO4: Theadvancedfeaturesofimageprocessingarebeingusedtodevelopmotionpictureandmotivatestudents to workintelevisionindustry.

Paper:MIT-204Fuzzy Systems

CO1: ThispaperprovidesthedetailknowledgeofAutomaticSensorControlledSystemstostudents.

CO2:Studentsgettolearnaboutthefuzzysystemsandfuzzycontrollerswhicharemostlybeingusedinmodernautomatic devices.

CO3:Thispaperishighlyrecommendedforstudentsinordertopursueresearchworksalso.

CO4:Thispaperenablesstudentstoapplytheirlogicsandknowledgeinsystemswhicharereallynearto human thinkingandbehavior.

CO5:Thispaperwillmakestudentsunderstandthathowhumanbehaviorisbeingrationalizedbycomputersystemsinroboticsandlivehardwaresystemsbasedonsensortechnologies.

CO6: Students can get many job opportunities and new visions for research after getting throughthis paper.

Paper:MIT-205 NetworkDesignandPerformanceAnalysis

CO 1:Developing networking skills almost immediately places and to make a career in virtually anysector.Alltheindustrialsectorslikethefinancialservices,transport,manufacturing,education,technology,Government,healthcare,hospitality,andretailandsoonexperienceshortage ofskillednetworkingspecialists.

CO 2:Students can make a mark immediately in the field you desire. The Government sectors haveconsiderable scope for networking technology. The Defence and Intelligence services neednetworkingspecialists regularly.

CO 3: The technology is such that you can choose to start your own business as well. Networkingskillscan help you connect to other businesses thereby helping you to market your businessandservicesefficiently.

Semester-III

Paper:MIT-301NetworkProtocols

CO1: Thispaperprovidesknowledgeabouthowinformationistransmittedaccuratelyandunambiguouslyacross the systems.

CO2: ItinculcatesstudentsabouttheoverviewofcreatingIPaddressesandtheirconfigurations

CO3: Thispaperprovidesknowledgeaboutdifferentnetworkingtopologies,media,systemsandtheirmanagement

CO4: Studentscanusedifferentprotocolstoensureintegrityandsecurityofcommunicationofunderlyingnetwork.

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CO5: This paper alsohelpsinsettingupproceduresforsendingandreceivingmessages,acknowledgementofreceipt,congestionavoidance,errorcorrectionetc.

Paper:MIT-302AdvancedWebTechnologies

CO 1:ASP.net supports multiple programming languages like C#, visual basic dot net, J#, C++ andservice-orientedarchitectures.

CO 2:Student having proficiency in on programming languages can build one module of largeapplication and can be used simultaneously with modules develop by other students havinggoodhandinotherprogramminglanguage.

CO 3: ASP.net provide is reliable and flexibility. Student can develop applications for differentdeviceslike laptop, smart-phones, pocketPCsandsoonusingsinglelanguage.

CO4: ASP.NET drastically reduces the amount of code required to build large applications.

CO5: StudentscaneasilydevelopsoftwareusingWizardsinDotnet framework.

CO6: Studentscangetjobeasilyrelatedtosoftwaredevelopment

Paper:MIT-303LinuxAdministration

CO1: LearningLinuxProvidesGoodJobOpportunitiestothestudentsinIT sector.

CO2: StudentslearnsToWriteEfficient,EffectiveScriptswithDocumentation.

CO3: AsItIsAvailableFreeofCostandCanEasilyRunonOlderandCheaperComputersItprovides SubstantialFinancialSavings.

CO4: It Provides High Security. Using Linux means avoiding viruses and malware.

CO5: Improves ProblemSolvingSkills of the students.

Paper:MIT-304SystemSimulation

CO1: ThispaperisreallyveryefficientoneinM.Sc.andprovidestudentswithgreatinsightofnewlysystems and theirsimulations.

CO2: Thispaperincresestheinterestofstudentsinthecreationofnewlycomputerizedsystemsbyfirst makingtheir simulations.

CO 3: By complete understanding of this paper students will be able to work with various MNCs,firmsandorganizationhelpingin the manufacturingofnew systems.

Paper:MIT-305Microprocessor andIts Application

CO 1:A microprocessor isnormallycapableofmanyfunctions,suchaswordprocessing,calculation,andcommunicationvia Internetortelephoneandthishelpsstudents tounderstandthedetailedviewofmicroprocessorabouttheirfunctionalityandtheirproperties.

CO 2:Students can easily extend their knowledge of writing assembly code, for the x86 assemblylanguageandtheycanunderstandhowamachineinterpretsinstructionsatlowlevel.

CO 3:This paper provides knowledge how a processor at the lower level receive input from thekeyboards and the mice. Students can learn how and why memory segmentation in a processcameinto existence.

CO5: Thisalsoallowsstudentstounderstandaboutthereallifeapplicationsofthemicroprocessor.

Semester-IV

Paper:MIT-401AdvancedJavaTechnology

CO1: This paper is one of the specialized programme in M.Sc., which provides the detailknowledgeofJavaProgrammingLanguage.

CO2: Studentsgettolearnabouttheconceptsofobjectorientedprogram-mingandJavaProgrammingconstructs.

CO3: This paper enablesstudentstoimplementcommercialapplicationsinJava&JavaApplets.

CO4: Thispaper ishighlyrecommendedforstudentsinordertopursuecareerinsoftwaredevelopment.

CO5: Studentscan get manyjobopportunitiesandit can alsoactasatoolinresearchinsomespecialized-fields.

Paper:MIT-402 NetworkSecurity

CO1: ThispaperishighlyspecializedinM.Sc.(IT)whichelaboratethevariouscomponentsinvolvedinnet-worksecurity.

CO2: This paper enables students to learn basic and advance concepts of most importantcomponent i.e. personallevelfirewallandgatewaylevelfirewall.

CO3: Studentsareabletounderstandsecurityconcepts,securitythreats,securityservicesandmechanismsto counter them.

CO4: This paper discussesadvancemethodsindesigningnetworksfromsecuritypointofview.

CO5: Thishelpsinunderstandingandchoosingspecializednetworkingsecuri-tydeviceUTM(UnifiedThreatManagement)froma numberofavailabledevicesinthe market.

CO6: This paper ishavinglargescopeinindustryandresearch.

Paper:MIT-403ArtificialNeuralNetwork

CO1: Thispaper ishighlyspecializedinM.Sc.(IT)whichelaboratethefuturedesignandimplementation-inthefieldof networking.

CO2: ItcoversthepresentdayrequirementofPatternrecognition,Characterrecognition.

CO3: Itcloselyresemblesthehumanbrainnetworkingincludinglearning,logistics,recognitionsandretain-inginformation.

CO4: Now adaysthisprogrammeishavinggreatsignificanceinallfieldswherespecializationlikehuman is required.

CO5: Studentscangetmanyresearchandjobopportunityafterpursuingthisspecializedprogramme.

Paper:MIT-405PProject

CO1: TheProjectwillmakeStudentsabletoidentifytherequirementsforthe-realworldproblemsandcorrelatingthemwhich willmakethemabletodevelopsoftwaresolutionsforthem.

CO2: ProjectModulesmakestudentslearnlogicallyandanalyticallysothat-theycanpursuetheircarrierinthefield ofSoftware Development in differentMNCsand Industries.

CO3: This paper inculcatestheimportantinstudentstomakethemagoodSoftwareDeveloperinorder tomakeprojectsaccordingtothe need of customersandcompanies.

CO4: Thispapermotivatesstudentstoworkinteamsandmanagetheconduc-toftheresearchstudyinnearfuture.

CO5: Studentscanmakeprojectsaswebsitesandsoftwareinvariousdifferent-languageslikeJAVA,ASP.net,PHP and Androidalso.

Post Graduate Diploma in Computer Applications

Semester-I

Paper:IPCComputing-I(MS-Office)

CO 1:Thispaperisthebasesubjectforgivingthebasicfundamentalconceptofapplicationsoftwaretothe students.

CO 2: The motive of this subject is to give knowledge of basics of computer and MS-Offices tostudentsso that students can pursue their carrier in the field of office automation anddesktoppublishing.

CO 3:Thispaperestablishknowledgeofcreatingeffectivedocuments,presentationslidesandExcelWorkbooks in students so that students can use their calibre in the field of banks,corporate sectorsetc.

Paper:IIPCComputing-II(Professional DTP)

CO1: Thispaperprovidesfundamentalinformationaboutcomputeranditsworking.Anumberofdevicesthatcanbeattachedwithamachinenowadayare also discussed.

CO2: Students become able to bridge the fundamental concept of computers with their present levelof knowledgeaboutcomputers.

CO3: ThispaperincludesMicrosoftOfficeprogramswhichenablethestudentstocreateprofessionalandacademic documents.

CO4: StudentsalsolearnaboutvariousaccountingrelatedoperationsinMSExcelandpresentationskillsusingMS PowerPoint.

Paper:IIIFundamentalsofComputerandOS

CO 1:This paper provides fundamental information about computer and its working. A number ofdevicesthatcanbeattachedwithamachinenowadayare also discussed.

CO 2: Students become able to bridge the fundamental concept ofcomputers with their present levelofknowledgeaboutcomputers.

CO3: ThispaperincludesMicrosoftOfficeprogramswhichenablethestudentstocreateprofessionalandacademic documents.

CO 4:Students also learn about various accounting related operations in MS Excel and presentationskillsusingMSPowerPointwhichmakesthemabletoworkinfieldofOfficeAutomationandDesktop Publishingaswell.

Paper:IVDatabaseManagementSystem

CO 1:This paper is very significant for the graduate students as it delivers detail understanding ofdatabasesystemsanditsdesign.

CO 2: It is having big role in all types of industry/institutions because all kind of necessary data is tobestoredindatabase.

CO 3:Thispaperalsodeliversthedesignandimplementationofdatabasesandgeneratesopportunity for students to become data managers, Data base administrators and get jobsinanykindofbusinesshouse.

CO 4:Itprovidesopportunityforfuturedevelopmentandresearchinthefieldofdatabasetechniqueslikedata ware housing and data mining as these are the basic needs of all types ofbusinessnowandinfuture.

Semester-II

Paper:INetworkConceptsandManagement

CO 1:This paper inculcates the complete knowledge of Networking in students which is the mostessentialandadvantageousin the presentscenarioofInternetand Networking.

CO 2: Complete Understanding of the specified paper provides students with the information ofVariousNetworkTopologies,NetworkProtocols,NetworkEssentialsandNetworkControlling.

CO3:ThispaperwillhelpstudentstogetproperinformationaboutmanyNetworkDevicesandtheirUsessothatstudentscanusetheminRealWorld also.

CO 4: Students will thoroughly study about the transmission media and to realize and comparedifferentLAN, MANamendWANTopologies.

CO 5: Studying the detailed information about the Internet Protocols will increase the ability instudents toworkintherealnetworkingdevelopmenttechniques.

Paper:IIProgrammingin C

CO 1:This paper provides the basic insight of programming skills to the students who are beginningtheircourseworkinvariousComputerProgrammingLanguages.

CO 2: C Programming acts as the base of Programming Languages which will thoroughly increasetheinterest of studentsinProgrammingField.

CO 3:All Advanced Computer Programming Languages are belonging to the base concept of CProgramming and Learning the basic concept of this course, will help students in AdvanceLanguages also.

CO 4:This Language is being accepted as Universal Programming Language, therefore the conceptunderstandingofthislanguagewillinculcatethoroughknowledgeofproceduresofProgrammingLanguagein Students.

CO 5:This paper is specifically being used in a multitude of applications, including advancedscientificsystemsandoperatingsystems

Paper:IIIIntroductiontoScriptingLanguage,WebDesigning&Usesof Internet

CO 1:This paper work is highly efficient and recommended one for the provision of knowledge tostudents about Website Development and Software Development which will highly increasetheiropportunitiestoworkin industries.

CO 2: This paper is the combination of many Sever Side and Client Side Programming LanguageslikeCSS, Java Script, Java Servlets, ASP.net and PHP for the successful establishment ofWebsiteorSoftware.

CO 3: Students will get through the internal knowledge of Back- End and Front- End Processsesusingwhichtheywillbeabletodesign their own WebsitesorSoftware.

CO4: This paper will also provide the information about the Data base Connectivity along with thegivenFrontEndwebsiteorsoftwaresothatthestudentscanlearnabouttheDataTransferProcedures   formsFrontEnd to Back-End and Vice-Versa.

Paper:IVMultimediaSystems

CO 1: This paper is used to become graphic designers and by having knowledge of this subject, theyhave the desired skills in Drawing, Lay outing, Typography, Lettering, Diagramming, andPhotography.

CO 2:This subject gives us knowledge to develop the layout and production design of newspapers,magazines,corporatereports,journalsandotherpublications.

CO 3:Students can also create marketing brochures for services and products, promotional displayspackaging,design distinctive logosfor businesses andproducts.

Name of Programme: Diploma in Computer Applications
Semester-I
Paper:IInformationTechnologyandOperatingSystem

CO 1:This paper provides fundamental information about computer and its working. A number ofdevicesthatcanbeattachedwithamachinenowadayare also discussed.

CO 2: Students become able to bridge the fundamental concept of computers with their present levelofknowledgeaboutcomputers.

CO 3:The study of Operating System helps students to analyse the memory management and itsallocationpolicieswhichistheprimefactorofconsiderationineveryOperatingSystem,

CO 4: This paper helps students to identify use and evaluate the storage management policies withrespect to different storage management technologies of Operating Systems like Windows,Linuxand UNIX.

Paper:IIPCComputing-I

CO 1:This paper provides fundamental information about computer and its working. A number ofdevicesthatcanbeattachedwithamachinenowadayare also discussed.

CO 2: Students become able to bridge the fundamental concept of computers with their present levelofknowledgeaboutcomputers.

CO 3:ThispaperincludesMicrosoftOfficeprogramswhichenablethestudentstocreateprofessional and academicdocuments.

CO 4:Students also learn about various accounting related operations in MS Excel and presentationskillsusingMSPowerPointwhichmakesthemabletoworkinfieldofOfficeAutomationandDesktop Publishingaswell.

Semester-II

Paper:IDatabaseManagement System

CO 1:This paper is very significant for the graduate students as it delivers detail understanding ofdatabasesystemsanditsdesign.

CO2: Itishavingbigroleinalltypesofindustry/institutionsbecauseallkindofnecessarydataisto bestoredin database.

CO 3:Thispaperalsodeliversthedesignandimplementationofdatabasesandgeneratesopportunity for students to become data managers, Data base administrators and get jobs inanykind of businesshouse.

CO 4:Itprovidesopportunityforfuturedevelopmentandresearchinthefieldofdatabasetechniqueslikedata ware housing and data mining as these are the basic needs of all types ofbusinessnowandinfuture.

Paper:IIPCComputing-II

CO 1: This paper is specifically providing complete knowledge about MS-Access to students andgivingthemthoroughknowledgeabouttheDatabaseEstablishmentandConnection.

CO 2:MS-Access is being used in various big organizations, industries and MNCs for making thehandling of data more simpler and much efficient and better understanding of this paper willhelpstudents to controlthistypeofworkinvarious Offices as well.

CO 3:Students get to learn about the process of creating Tables and making the concept of DatabasehandlingmorepresentableandunderstandingfortheSoftwareDevelopersaswell.

B.A./B.Sc.(ComputerScience)/B.Sc.(Economics)

Semester-I

Paper: ComputerFundamental&PC Software

CO 1:This paper provides fundamental information about computer and its working. A number ofdevicesthatcanbeattachedwithamachinenowadayare also discussed.

CO 2:After completing this paper, students become able to bridge the fundamental concept ofcomputerswiththeirpresentlevelof knowledge aboutcomputers.

CO 3:ThispaperincludesMicrosoftOfficeprogramswhichenablethestudentstocreateprofessionalandacademic documents.

CO 4:Students also learn about various accounting related operations in MS Excel and presentationskillsusing MS PowerPoint which makes them able to work in field of Office AutomationandDesktopPublishingas well.

Semester-II

Paper:ProgrammingUsing C

CO 1:This paper provides the basic insight of programming skills to the students who are beginningtheircourseworkinvariousComputerProgrammingLanguages.

CO 2: C Programming acts as the base of Programming Languages which will thoroughly increasetheinterest of studentsinProgrammingField.

CO 3:All Advanced Computer Programming Languages are belonging to the base concept of CProgramming and Learning the basic concept of this course, will help students in AdvanceLanguages also.

CO 4:This Language is being accepted as Universal Programming Language; therefore the conceptunderstandingofthislanguagewillinculcatethoroughknowledgeofproceduresofProgrammingLanguagein Students.

Semester-III

Paper:ComputerOrientedNumericalandStatisticalMethods

CO 1:This paper provide the learning insights of Concept of Statistical Analysis of the Data to thestudents so that they can effectively and efficiently store the data inside the systems where itwillbehavingalowcostandtimingaccesseasily.

CO 2: In the field of Computing, this course work will help the students to research and experimentaboutthe statistical details of the data and perform mathematical calculations of the data aswell.

CO 3: This paper give students complete knowledge to calculate various statistical calculation onDatalikeCalculatingMean,Median,Mode, Kurtosis,Momentsand Regression.

CO 4:This paper work increases the critical and analytical strategies in students so that students canpursuetheir carrier in ResearchandDevelopmentField.

Semester-IV

Paper:DataStructures&ProgrammingLanguageUsingC++

CO1:   Studentsbecomeabletoselectappropriatedatastructuresasappliedtospecifyproblemdefinition.

CO2:   Studentslearnaboutapplicationofvariousdatastructurelike-

stacks,queues,tree,graph,linkedlistetc.related to differentoperations.

CO3:   This paper is highly necessary to learn and implement logics in computer science.

CO4:   It also includesthevariousconceptsrelatedtodatastoragein computers.

CO5:   Studentslearntoanalyzeandcomparealgorithmsforefficiency.

Semester-V

Paper: DataBaseManagementSystem&Oracle

CO 1:This paper is very significant for the graduate students as it delivers detail understanding ofdata-basesystemsanditsdesign.

CO 2: It is having big role in all types of industry/institutions because all kind of necessary data is tobestoredindatabase.

CO 3:Thispaperalsodeliversthedesignandimplementationofdatabasesandgeneratesopportunity for students to become data managers, Data base administrators and get jobs inanykind of businesshouse.

CO 4:Itprovidesopportunityforfuturedevelopmentandresearchinthefieldofdatabasetechniqueslikedata ware housing and data mining as these are the basic needs of all types ofbusinessnowandinfuture.

Semester-VI

Paper:InformationTechnology

CO 1:ThispaperprovidesthedeepinsighttostudentsaboutInformationTechnologyandNetworkingsothat students can understand the basic concepts of Internet and ComputerNetworks.

CO 2:This paper structure provides with the complete knowledge of Protocols, Topologies andLatestTechnologieswiththeadvancements in thefieldofNetworking.

CO 3:This paper provides the knowledge of cables, connections, connectors and all the requiredtechnol-ogiesforNetworkinglikeIEEE,TCP/IP etc.

B.A. (Bachelor of Arts)

Computer Application (Vocational)Semester-I

Paper: ComputerFundamental&PcSoftware

CO1: This paper provides fundamental information about computer and its working. A number of-devicesthatcanbeattachedwithamachinenowadayare also discussed.

CO2: After completing this paper, students become able to bridge the fundamental concept ofcomput-erswiththeirpresentlevelofknowledgeaboutcomputers.

CO3: ThispaperincludesMicrosoftOfficeprogramswhichenablethestudent-stocreateprofessionalandacademic documents.

CO4: Students also learn about various accounting related operations in MS Excel and presentation-skillsusing MS PowerPoint which makes them able to work in field of Office AutomationandDesk-topPublishingas well

Semester-II

Paper:ProgrammingUsing C

CO1: This paper provides the basic insight of programming skills to the students who are begin-ningtheir course workinvariousComputerProgrammingLanguages.

CO2:C Programming acts as the base of Programming Languages which will thoroughly increasethe-interest of studentsinProgrammingField.

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CO3: All Advanced Computer Programming Languages are belonging to the base concept of CProgramming and Learning the basic concept of this course, will help students in AdvanceLanguages also.

CO4: This Language is being accepted as Universal Programming Language, therefore the conceptunderstandingofthislanguagewillinculcatethoroughknowledgeofproceduresofProgrammingLanguage in Students.

CO5: This Paper Work is specifically being used in a multitude of applications, including advancedscientificsystems and operatingsystems

Semester-III

Paper:OperatingSystem

CO1: This Paper Work explains and describes about the important computer system resources andthe role of operating system in their management policies to get a better understanding aboutthe concept of various Process Management Techniques under different Operating Systemsavailable.

CO2: The paper gives detailed description about the process and functions of Operating System inordertoschedule, manage andcontroltheprocessesgoinginsidethesystem.

CO3: The study of Operating System helps students to analyze the memory management and itsallocationpolicieswhichistheprimefactorofconsiderationineveryOperatingSystem,

CO4: This paper helps students to identify use and evaluate the storage management policies withrespect to different storage management technologies of Operating Systems like Windows,Linuxand UNIX.

Semester-IV

Paper:RelationalDataBaseManagementSystems&Oracle

CO1: This paper is very significant for the graduate students as it delivers detail understanding ofdatabasesystemsandits design.

CO2: It is having big role in all types of industry/institutions because all kind of necessary data is tobestoredindatabase.

CO3: Thispaperalsodeliversthedesignandimplementationofdatabasesandgeneratesopportunity for students to become data managers, Data base administrators and get jobs inanykind of businesshouse.

CO4: Itprovidesopportunityforfuturedevelopmentandresearchinthefieldofdatabasetechniques likedata ware housing and data mining as these are the basic needs of all types ofbusinessnowandinfuture.

Semester-V

Paper:InternetandWebDesigning

CO1: This paper provides the understanding of various concepts related to Internet where studentswilllearn about the Connection Establishment, configuring the network, trouble shoot thenetworketc.

CO2: Students learn about the various measures being used for securing the network along with thehelpofInternetProtocolsandincreasein the use various SecurityFirewalls

CO3: Paper gives suitable information to students in order to get maximized advantages from thenetwork by [Department of Computer Science](#)

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Paper: II Introduction to Programming-C

Paper: I Introduction to Programming Languages

CO 1: This paper provides the basic insight of programming skills to the students who are beginning their career in various Computer Programming Languages.

CO 2: C Programming acts as the base of programming languages which will thoroughly increase the interest of students in the programming field.

CO 3: All advanced computer programming languages are belonging to the base concept of C programming and learning the basic concept of this course will help students in advanced languages also.

CO 4: This language is being accepted as a universal programming language; therefore, the conceptual understanding of this language will inculcate thorough knowledge of procedures of programming language in students.

CO 5: This paper is specifically being used in a multitude of applications, including advanced scientific systems and operating systems.

Paper: II Introduction to Computers and Information Technology

CO 1: This paper provides fundamental information about computers and their working. A number of devices that can be attached with a machine nowadays are also discussed.

CO 2: Students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO 3: This paper includes Microsoft Office programs which enable the students to create professional and academic documents.

CO 4: Students also learn about various accounting-related operations in MS Excel and presentation skills using MS PowerPoint which makes them able to work in the field of office automation and desktop publishing as well.

Paper: III Applied and Discrete Mathematics

CO 1: This paper provides a deep insight about the mathematical foundational topics to students.

CO 2: Complete knowledge of Boolean Algebra is given through this course structure, so that students can prepare themselves for further understanding of topics related to other subjects of the program.

CO 3: This helps students in many competitive exams also as the base for reasoning, quantitative techniques, and graph theory as well.

Semester-II

Paper: I Introduction to Programming-C++

CO1: This paper provides the expanded knowledge of C programming language and introduces the concept of object oriented programming languages so that students can learn about the real time problem solving techniques.

CO2: Specialized course work can be used for developing different applications, games, animations, web browser, compilers etc., giving students a lot of opportunities in IT industries as well.

CO3: Expansion of this paper is being used in system programming and embedded systems for the establishment of Computer Aided Designs and Computer Aided Manufacturing purposes also.

CO4: This Course improves the level of Logical and Analytical Thinking in Students so that they can give more emphasis on real world problem solving techniques and methods.

Paper: II Principles of Digital Electronics

CO1: This paper allows students to understand the internal circuitry of the process or memory in detail explaining about process creation, performance of various calculations, number system, number conversions and K-Mapping techniques.

CO2: It enables students to get through the mathematical foundation going inside the system for the bits transfer inside the processor, converting sum of product forms into product of sum forms, generating the read-write cycles and memory writing timing diagrams.

CO3: Digital Electronics makes students learn about the internal mechanism of Arithmetic Logical Unit inside the processor performing various calculations and manipulations.

CO4: Learning Best Outcomes of this paper will motivate students to make their own hardware live projects.

CO5: Students can pursue their future in hardware engineering by having complete knowledge of electronics.

CO6: This programme will inculcates the complete knowledge of electricity and computer system handling in students.

Paper: III Numerical Methods & Statistical Techniques

CO1: This paper provides the learning insights of concept of statistical analysis of the data to the students so that they can effectively and efficiently store the data inside the systems where it will be having a low cost and timing access easily.

CO2: In the field of computing, this paper will help the students to research and experiment about the statistical details of the data and perform mathematical calculations of the data as well.

CO3: This gives students complete knowledge to calculate various statistical calculations on data like calculating Mean, Median, Mode, Kurtosis, Moments and Regression.

CO4: This paper increases the critical and analytical strategies in students so that students can pursue their carrier in research and development field.

Semester-III

Paper: I Computer Architecture 98

CO1: This paper provides the knowledge about the way the hardware components operate and are connected together to form the computer system along with the deeper study of Computer Internal Circuitry Board as well.

CO2: Enhances the knowledge about the system components, circuit design, logical design, structure of instruction, computer arithmetic, processor control, assembly programming and methods of performance enhancement.

CO3: This paper is especially designed for the students to learn hardware details so that they can work in the Field of Hardware Engineering and be able to develop Hardware Live Projects also.

Paper: II Database Management System

CO1: This paper is very significant for the graduate students as it delivers detail understanding of database systems and its design.

CO2: It is having big role in all types of industry/institutions because all kind of necessary data is to be stored in database.

CO3: This paper also delivers the design and implementation of databases and generates opportunity for students to become data managers, Data base administrators and get jobs in any kind of business house.

Paper: III Computational Problem Solving & Statistical Techniques

CO1: This paper is specially designed for providing the thorough knowledge of programming to students.

CO2: Going from the basics to complete detail of the programming concept, this paper enables students to apply their own logics in computer system.

CO3: It is being widely used in various companies and MNCs, therefore the complete knowledge of this paper will help students to get through their training projects after placements.

CO4: Students can build up their own software projects by using the syntaxes and semantics of this programme.

Semester-IV

Paper: I Data Structures & File Processing

CO1: This paper is one of the main and technical paper of BCA course after which student's become able to select appropriate data structures as applied to specify problem definition.

CO2: Students learn about application of various data structure like stacks, queues, tree, graph, linked list etc. related to different operations.

CO3: This paper is highly necessary to learn and implement logics in computer science.

CO4: It also includes the various concepts related to data storage in computers.

Paper: II Information System

CO 1: This paper carries importance because information system management is a must for all industries/institutions by the use of information technology.

CO 2: This paper is best suitable for all the students who want to build their carrier in the system analyst, system designer and system manager as these are special jobs for new system development and design.

CO3: Students can also get good opportunity in various business verticals like accounting information system, inventory management, human resource management system etc.

CO4: This paper is very significant in various levels of business like TPS, MIS, DSS and ESS.

Paper: III Internet Application

CO 1: This paper provides the understanding of various concepts related to internet where students will learn about the connection establishment, configuring the network, trouble shoot the network etc.

CO 2: Students learn about the various measures being used for securing the network along with the help of internet protocols and increase in the use various Security Firewalls

CO 3: Paper gives suitable information to students in order to get maximized advantages from the network by implementing an accurate type of Topology and Connecting computer system in proper order.

CO 4: Students can pursue their carrier in the field of network security and network coordination which is presently in high demand throughout the Industry.

Paper: IV System Software

CO 1: This paper provides complete knowledge to the students about the process generation inside the internal architecture of the systems and helps them to understand how the processing is being done inside the system.

CO 2: Detailed insights about the Loader, Linker, Assembler and Compiler are given to the students by understanding which they can determine what the actual working is being performed inside the system when we initiate command.

CO 3: Study of various phases of the Compiler makes students more enthusiastic to learn about the internal process working of the system so that they can do specialization in the particular course

CO4: Students get to learn about the concept of macros, multi-threading and multiple process orientation techniques through this course work

Semester-V

Paper: I Computer Networks

CO1: This paper inculcates the complete knowledge of networking in students which is the most essential and advantageous in the present scenario of internet and networking.

CO2: Complete understanding of the specified paper provides students with the information of various network topologies, network protocols, network essentials and network controlling.

CO3: This Course will help students to get proper information about many network devices

CO4: Students will thoroughly study about the transmission media and to realize and compare different LAN, MAN and WAN topologies.

Paper: II Web Technologies

CO1: This paper is highly efficient and recommended one for the provision of knowledge to students about website development and software development which will highly increase their opportunities to work in industries.

CO 2: This course is the combination of many server side and client side programming languages like CSS, Java Script, Java Servlets, ASP.net and PHP for the successful establishment of Web site or Software.

CO 3: Students will get through the internal knowledge of back-end and front-end processes using which they will be able to design their own websites or software.

CO4: This paper will also provide the information about the data base connectivity along with the given frontend website or software so that the students can learn about the data transfer procedures.

Paper: III Operating System

CO 1: This paper explains and describes about the important computer system resources and the role of operating system in their management policies to get a better understanding about the concept of various Process Management Techniques under different operating systems available.

CO2: The paper gives detailed description about the process and functions of operating system in order to schedule manage and control the processes going inside the system.

CO3: The study of operating system helps students to analyses the memory management and its allocation policies which is the prime factor of consideration in every operating system,

CO 4: This course helps students to identify use and evaluate the storage management policies with respect to different storage management technologies of operating systems like Windows, Linux and UNIX.

Paper: IV JAVA Programming Language

CO 1: One of the most highly used and effective programming language JAVA, is the popular one IT sector for website and Software Development and this course give students a basic core and advanced technical information about JAVA Language.

CO2: Students get to learn about the basic concepts of object oriented programming and basic as well as advance Java Programming constructs.

CO3: This programme enables students to implement the constructs and structure of the Java Programming Language.

CO4: This programme is highly recommended for students in order to pursue career in software development in various MNCs in India and Abroad as well.

CO5: The Specialization of this will increase the opportunities for students to get jobs in the field of programming, website and software development, software testing etc.

Semester-VI

Paper: I Computer Graphics

CO1: This paper provides a detailed knowledge of Computer Screen and Audio Visual Aids to Students.

CO2: Students will get to know about the details of Image Resolution, Pixels, Bitmap and Pixel Map which helps them to understand the process of Image Processing.

CO3: Computer Graphics is a kind of Programme that enables students to understand the working of CRT, LCD and LED Displays so that they can design the screen graphics according to it.

CO 4: This helps students to get through the techniques of creating many Graphical Scenes and Scenes with Motion also which greatly helps them to create different live projects and work under various MNCs.

Paper: II Software Engineering

CO 1: Software engineering calls upon interdisciplinary skills like critical thinking, cost analysis & project management—skills that can been enhanced in a master's program in computer science, computer engineering, information science or software engineering.

CO 2: This paper will help students to pursue their career in software engineering with a focus on new technologies and areas of application, such as cyber security, big data, or mobile application development etc.

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CO3: This paper will develop a comprehensive understanding of programming, software architecture, and software testing which is in high demand in various MNCs and in vast IT Sector.

Paper: IV Project

CO 1: The project will enable students able to identify the requirements for the real world problems and correlating them which will make them able to develop software solutions for them.

CO 2: Project Modules make students learn logically and analytically so that they can pursue their carrier in the field of Software Development in different MNCs and industries.

CO 3: The paper inculcates the important software developing skills in students to make them a good Software Developer in order to make projects according to the need of customers and companies.

CO 4: This paper motivates students to work in teams and manage the conduct of the research study in near future.

B.Sc. (IT)

Semester-I

Paper I-Fundamentals of Computers

CO 1: This paper provides fundamental information about computer and its working.

CO 2: Students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO3: This paper includes Microsoft Office programs which enable the students to create professional and academic documents.

CO4: Students also learn about various accounting related operations in MS Excel and presentation skills using MS Power Point which makes them able to work in field of Office Automation and Desktop Publishing as well.

Paper: II Introduction to Programming-C

CO 1: This paper provides the basic insight of programming skills to the students who are beginning their course work in various computer programming languages.

CO 2: C Programming acts as the base of programming languages which will thoroughly increase the interest of students in programming field.

CO 3: All advanced computer programming languages are belonging to the base concept of C programming and learning the basic concept of this paper, will help students in advance languages also.

CO 4: This Language is being accepted as Universal Programming Language, therefore the concept understanding of this language will inculcate thorough knowledge of procedures of Programming Language in Students.

CO 5: This paper is specifically being used in a multitude of applications, including advanced scientific systems and operating systems

Paper: III Applied & Discrete Mathematics

CO1: This paper provides a deep insight about the mathematical foundational topics to students.

CO 2: Complete Knowledge of Boolean Algebra is given through this paper, so that students can prepare themselves for further understanding of topics related to other subjects of Programme.

CO 3: This paper helps students in many competitive exams also as the base for reasoning and quantitative techniques and graph theory as well.

Semester-II

Paper: I Principles of Digital Electronics

CO1: This paper allows students to understand the internal circuitry of the processor and memory in detail explaining about Process Creation, Performance of Various Calculation, Number System, Number Conversions and K-Mapping Techniques.

CO 2: This paper enables students to get through the mathematical foundation going inside the system for the bits transfer inside the processor.

CO 3: Digital Electronics makes students learn about the Internal Mechanism of Arithmetic Logical Unit inside the Processor performing various calculations and manipulations.

CO 4: Learning Best Outcomes of this Paper will motivate students to make their own hardware Live Projects.

CO 5: Students can pursue their future in Hardware Engineering by having complete knowledge of Electronics.

Paper: II Introduction to Programming- C++

CO 1: This paper provides the expanded knowledge of C Programming language and introduces the concept of object oriented programming languages so that students can learn about the real time problem solving techniques.

CO2: Specialized paper can be used for developing different applications, games, animations, web, data base software, compilers etc., giving students a lot of opportunities in IT Industries as well.

CO 3: Expansion of this paperwork is being used in system programming and embedded systems for the establishment of Computer Aided Designs and Computer Aided Manufacturing purposes also.

CO 4: This paper improves the level of Logical and Analytical Thinking in Students so that they can give more emphasis on real world problem solving techniques and methods.

CO 5: C++inculcates all the required concepts, knowledgeable methodologies and structure oriented guidance in Students which motivates them to be a Good Programmer in future.

Paper: III Numerical Methods & Statistical Techniques

CO 1: This paper provides the learning insights of Concept of Statistical Analysis of the Data to the students so that they can effectively and efficiently store the data inside the systems where it will be having a low cost and timing access easily.

CO 2: In the field of Computing, this paperwork will help the students to research and experiment about the statistical details of the data and perform mathematical calculations of the data as well.

CO 3: This paper gives students complete knowledge to calculate various statistical calculations on Data like Calculating Mean, Median, Mode, Kurtosis, Moments and Regression.

CO 4: This paperwork increases the critical and analytical strategies in students so that students can pursue their carrier in Research and Development Field.

Semester-III

Paper: I Introduction to Python

CO 1: This paper is specially designed for providing the thorough knowledge of programming to students.

CO2: Going from the basics to complete detail of the programming concept, this programme enables

students to apply their own logics in computer system.

CO3: This programme is being widely used in various companies and MNCs, therefore the complete knowledge of this programme will help students to get through their training projects after placements.

CO 4: Students can build up their own Software Projects by using the syntaxes and semantics of this programme.

Paper: II Data Structure

CO1: This paper is one of the main and technical papers of BSc. IT course after which students become able to select appropriate data structures as applied to specify problem definition.

CO2: Students learn about application of various data structure like stacks, queues, tree, graph, linked list etc. related to different operations.

CO3: This paper is highly necessary to learn and implement logics in computer science.

Paper: III System Analysis & Design

CO1: This paper is specifically designed to give the knowledge about the analysing and designing procedures of a system so that students can go through inside details.

CO2: Students can work as System Analyser and System Handlers in various companies and IT industry.

CO3: This paper is very effectively providing students with the knowledge of various constructs and structures useful in analysing the system and designs a system as well.

Semester-IV

Paper: I Database Management System

CO 1: This paper is very significant for the graduate students as it delivers detail understanding of data base systems and its design.

CO 2: It is having big role in all types of industry/institutions because all kind of necessary data is to be stored in database.

CO 3: This paper also delivers the design and implementation of databases and generates opportunity for students to become data managers, Data base administrators and get jobs in any kind of business house.

Paper: II Internet Applications

CO 1: This paper provides the understanding of various concepts related to Internet where students will learn about the Connection Establishment, configuring the network, trouble shoot the network etc.

CO 2: Students learn about the various measures being used for securing the network along with the help of Internet Protocols and increase in the use various Security Firewalls

CO 3: Paper gives suitable information to students in order to get maximized advantages from the network by implementing an accurate type of Topology and Connecting Computer System in proper Order.

CO 4: Students can pursue their carrier in the field of Network Security

Paper: III JAVA & Web Designing

CO 1: One of the most highly used and effective programming language JAVA, is the popular one IT sector for website and software development and this give students a basic core and advanced both types of technical information about JAVA language.

CO 2: Students get to learn about the basic concepts of object oriented programming and basic as well as advance Java Programming constructs.

CO3: This paper enables students to implement the constructs and structure of the Java Programming language in the successful creation of Java Applets and Java Servlets.

CO4: This paper is highly recommended for students in order to pursue career in software development in various MNCs in India and Abroad as well.

Paper: IV Web technology

CO1: This paper is highly efficient and recommended one for the provision of knowledge to students about website development and software development which will highly increase their opportunities to work in industries.

CO 2: This paper is the combination of many sever side and client side programming languages like CSS, Java Script, Java Services, ASP.net and PHP for the successful establishment of web site or software

CO 3: Students will get through the internal knowledge of back-end and front-end processes using which they will be able to design their own websites or software.

CO 4: This will provide the information about the data base connectivity along with the given front end website or software so that the students can learn about the data transfer procedures form front-end to back-end and vice-versa.

Semester-V

Paper: I Computer Networks

CO1: This paper inculcates the complete knowledge of Networking in students which is the most essential and advantageous in the present scenario of internet and networking.

CO2: Complete Understanding of the specified paper provides students with the information of various network topologies, network protocols, network essentials and network controlling.

Paper: II Operating System

CO 1: This paper explains and describes about the important computer system resources and the role of operating system in their management policies to get a better understanding about the concept of various process management techniques under different operating systems available.

CO 2: The paper gives detailed description about the process and functions of operating system in order to schedule manage and control the processes going inside the system.

CO 3: The study of operating system helps students to analyse the memory management and its allocation policies which is the prime factor of consideration in every operating system.

CO 4: This paper helps students to identify use and evaluate the storage management policies with respect to different storage management technologies of operating systems like Windows, Linux and UNIX.

Paper: III E-Business

CO1: This paper is one of the strong theoretical concepts regarding the online business.

CO2: This paper enables the students to clear the concept regarding traditional and online business concepts.

CO3: This paper helps students to understand the basics of the E-Business and techniques to handle business digitally in order to have productive outcome from the business.

Semester-VI

Paper: I Computer Graphics

CO1: This paper provides a detailed knowledge of Computer Screen and Audio Visual Aids to Students.

CO2: Students will get to know about the details of Image Resolution, Pixels, Bit map and Pixel Map which helps them to understand the process of Image Processing.

CO3: Computer Graphics is a kind of paper that enables students to understand the working of CRT, LCD and LED Displays

CO 4: This paper helps students to get through the techniques of creating many Graphical Scenes and Scenes with Motion also which greatly helps them to create different live projects and work under various MNCs.

Paper: III Project

CO 1: The Project will make Students able to identify the requirements for the real world problems and correlating them which will make them able to develop software solutions for them.

CO 2: Project Modules make students learn logically and analytically so that they can pursue their carrier in the field of Software Development in different MNCs and Industries.

CO 3: This paper inculcates the important software developing skills in students to make them a good Software Developer in order to make projects according to the need of customers and companies.

CO 4: This paper motivates students to work in teams and manage the conduct of the research study in near future.

M.Sc.(Computer Science)

Semester-I

Paper: MCS-101 Advanced Data Structure

CO1: This paper provides the students with the deep knowledge of algorithm design and analysis

CO2: This paper also provides means for management of large data set such as databases or internet indexing services by allowing the data use and processing on a software system.

CO3: Many reputed companies like Amazon, Microsoft hire students on the basis of their practical knowledge in the data structures.

Paper: MCS-102AdvancedComputerArchitecture

CO 1: The study of computer architecture and organization focuses on the interface between hardware and software, and emphasizes the structure and behaviour of the system that provides hardware details of the system to the students.

CO 2: This paper inculcates the hardware knowledge of processor in students and it is important that computer students need a basic understanding of computer system itself in order to rectify the problems.

CO 3: There are a fundamental relationship between hardware and the many aspects of programming and software components in computer systems.

Paper: MCS-103 Network Design & Performance Analysis

CO 1: This paper provides students with the detail knowledge of networking concepts being highly used in modern time's technologies. And it also provides shared access to customer and product databases in

a very less time

CO 2: Network protocol analysis is a network sniffer to capture data for further analysis and understanding of the technical means necessary packets. Students can pursue their career in the field of professional network developing which is highly in demand in India and Abroad as well.

CO 3: Best understanding of networking concepts make students more confident about the business Startups in field of professional networking development.

CO 4: This paper will enable students to get best placements as Networking Professionals and Network Developers in various companies.

Paper: MCS-104 Discrete Structures

CO 1: Discrete Structures is of direct importance to the fields of Computer Science and Information Technology. This allows students to study areas such as set theory, logic, relations, graph theory and analysis of algorithms.

CO 2: Modeling with discrete mathematics is an extremely important problem solving skill in which the students perform combinatorial analysis to solve counting problems and analysealgorithms.

Paper: MCS-105SoftComputing

CO1:   This paper helps to understand the basic knowledge of probability, fuzzy logic and neural networks that allows students to handle problems with imprecise and incomplete data

- **CO2:** The paper inculcates the knowledge about the fuzzy logic toolbox and covers a wider range of operating conditions, more readily customizable in natural language terms.
- **CO4:** This paper provides understanding of various membership functions of fuzzy logic and use of fuzzy and neural for various real-world problems.
- **CO5:** This paper also provides understanding of the various types of neural networks and their algorithms.

Paper: Theory of Computation (MCS-201)

- **CO1:** Students understand the mathematical laws governing efficient computation and apply this understanding to address problems in other parts of computer science.
- **CO2:** This paper teaches students about the elementary ways in which a computer can be made to think. It provides good problem-solving skills and behind the logic of any compiler.
- **CO3:** In theory of computation, students will learn abstract machines, or model of computation, which will be defined mathematically.

Paper: Image Processing (MCS-203)

- **CO1:** This paper will provide students useful and essential skills and experience to make a career as creative professionals such as graphic designers, gallery managers, art curators, commissioning editors, and art directors, etc.
- **CO2:** Having knowledge about this paper, students will get to know about the detailed functions of image processing software so that students can learn about restoration, manipulation, and development of various imaging techniques.

- **CO3:** This paper provides knowledge to develop the layout and production design of newspapers, magazines, corporate reports, journals, and other publications.
- **CO4:** The advanced features of image processing are being used to develop motion pictures and motivate students to work in the television industry.

Paper: Design & Analysis of Algorithm (MCS-203)

- **CO1:** A Software programmer is responsible for designing, installing, testing, and maintaining software systems. A Software Programmer has to review current systems, present ideas for system improvements, work with analysts, product specifications, and write the program codes. This paper helps to inculcate all the major responsibilities of a software programmer in students so that they can compete in the market well.
- **CO2:** Students learn to design and develop many types of software like operating systems, network distribution, and software for compilers through this paper.
- **CO3:** Through this paper, students will learn to work in industries as software publishers, gaming companies, and government organizations. Students can also develop their own software projects independently.
- **CO4:** They can pursue the career of a Technical writer who prepares instruction manuals, journal articles, and other documents to communicate complex and technical information more easily.

Paper: MCS-204CloudComputing

CO 1: It provides a deep knowledge to students about virtualization. Cloud environment gives our business the ability to communicate and share more easily outside of the traditional methods.

CO 2: Through this subject students will learn about the different models used in cloud for service provided.

CO 3: With the growing number of web-enabled devices used in today's business environment (e.g. Smart phones, tablets) access to our data is even easier. And the paper enables the students to understand and learn the use of internet and cloud in various organizations.

CO 4: Moving to cloud computing may reduce the cost of managing and maintaining your IT systems. Students came to know about the energy efficiency in cloud

Paper: MCS-205 Distributed Database System

- CO1:   This specialized paper focuses on future design and implementation in the field of networking.

  CO2: It covers advanced development related to networking, including information storage and retrieval.

  CO3: Students gain insights into specialized networking techniques that ensure efficient processing of large information systems.

  CO4: The course also explores remote network and server processing, emphasizing data availability to users when needed.

Semester-III

Paper: MCS-301 Advanced Software Engineering

CO 1: The Advanced Software Engineering is a newly redesigned course that enables students to extend their knowledge & gain valuable experience in software engineering as it applies to a number of new and important areas of it and computing.

CO2: Software engineers may choose to become experts in a single programming language

CO3: Having knowledge of this subject students can work as web developer, software engineer, Mobile development, Technical stack (e.g., Python, Ruby) etc.

Paper: MCS-302 System Software

CO 1: This paper provides complete knowledge to the students about the process generation inside the internal architecture of the systems and helps them to understand how the processing is being done inside the system.

CO 2: Detailed insights about the Loader, Linker, Assembler and Compiler are given to the students through this paper by understanding which they can determine what the actual working is being performed inside the system when we initiate a command.

CO 3: Study of various phases of the Compiler makes students more enthusiastic to learn about the internal process working of the system so that they can do specialization in the particular course

CO 4: Students get to learn about the concept of Macros, Multi- Threading and Multiple Process Orientation techniques through this course work

Paper: MCS-303 Data Mining and Warehousing

CO 1: This paper provides knowledge about how data is integrated across enterprises and industries

CO2: This paper helps students in solving What-if analysis and various mining techniques to handle the business scenarios.

CO3: This paper inculcates the capability of decision making on current and historical data and its implementation

CO4: This paper makes it understand to the students how to manage and control businesses and perform mining on the required data.

Paper: MCS-304 Concept of Core and Advanced JAVA

CO1: This paper is one of the specialized Programme in M.Sc., which provides the detail knowledge of Java Programming Language.

CO2: Students get to learn about the basic concepts of object oriented programming and basic as well as advance Java Programming constructs.

CO3: This paper enables students to implement applications in Java & Java Applets.

CO4: This paper is highly recommended for students in order to pursue career in software development.

Paper: MCS-305 Network Programming

CO1: Network programming write software programs or scripts that aid in network analysis, such as diagnostics or monitoring utilities.

CO2: This paper helps students to integrate new software technologies into an existing network environment or to build a new environment.

CO3: Network technicians often work the help-desk services to repair or upgrade computers. Technicians need to be familiar with the different operating systems such as Microsoft, Novell, and UNIX, as well as the basics of computer networking.

Semester-IV

Paper: MCS-401Advanced Web Technologies

CO 1: This subject provides combination of many languages which are useful for students to develop web sites. ASP .NET significantly reduces the amount of code required for building large and complex applications which can increase overall development speed and reduce development costs.

CO 2: ASP.NET is an open-source server-side web application framework designed for web development to produce dynamic web pages and by implementing CSS students came to know about formatting.

CO3: This paper enables students to get through the inner functioning details of Asp. Net framework. Asp. Net framework is language independent, means students can choose any programming language which best suited.

Paper: MCS-402 Microprocessor and Its Application

CO1: A microprocessor is normally capable of many functions, such as word processing, calculation, and communication via Internet or telephone and this helps students to understand the detailed view of microprocessor about their functionality and their properties.

CO 2: Students can easily extend their knowledge of writing assembly code.

CO 3: This paper provides knowledge how a processor at the lower level receives input from the keyboards and the mice and they can learn how and why memory segmentation in a process came into existence.

Paper: MCS-403Object Oriented Modeling, Analysis and Design

CO1: OOAD is often used in the area of object oriented programming (OOP). OOP aims to produce software that is efficiently written with few instances of duplicated code.

CO 2: Object-oriented analysis and design (OOAD) is a technological approach to analyse, design a software system or business by using Object Oriented (OO) concept.

CO 3: An efficient analysis is only possible when we think in a way where objects can be identified. After identifying the objects the relationships between them are identified and finally the design is produced. It also provides learning of principles of relational, hierarchical and object-oriented databases

CO 4: OOAD allows complete understanding about the current trends in data management, such as data mining and business analytics.

Paper: MCS-405PProject

CO 1: The Project will make Students able to identify the requirements for the real world problems and correlating them which will make them able to develop software solutions for them.

CO 2: Project Modules make students learn logically and analytically so that they can pursue their carrier in the field of Software Development in different MNCs and Industries.

CO 3: paper inculcates the important software developing skills in students to make them a good Software Developer in order to make projects according to the need of customers and companies.

CO 4: This paper motivates students to work in teams and manage the conduct of the research study in

near future.

M.Sc.(Information Technology)

Semester-I

Paper: MIT-101 Analysis and Design of Embedded System

CO1: Embedded System is designed to function with minimal or no human interference. This course explains embedded system concepts and architecture of embedded systems.

CO2:   This paper also describes the architecture of PIC, AVR and DSP micro controllers.

CO3:   Students can learn different types of operating systems and their services used required for designing embedded systems.

Paper: MIT-102 Distributed Computing

CO1:   This paper is highly specialized in M.Sc. (IT) which elaborates the future design and implementation in the field of networking.

CO2:   This paper provides advance development in the field of networking, storing and fetching of information.

CO3: This helps in understanding and specialized networking techniques which ensure the processing of large information systems without any failures.

Paper: MIT-103Advanced Computer Organization and Architecture

CO1: The study of computer architecture and organization focuses on the interface between hardware and software, and emphasizes the structure and behavior of the system that provides hardware details of the system to the students.

CO 2: This paper inculcates the hardware knowledge of processor in students and it is important that computer students need a basic understanding of computer system itself in order to rectify the problems.

CO3: There are a fundamental relationship between hardware and the many aspects of programming and software components in computer systems.

Paper: MIT-104 Network Operating System

CO 1: This paper is one of the highly specialized programme in M.Sc., which provides the detail knowledge of Network Operating System specifically Microsoft Windows Server.

CO 2: Students get to learn about the various concepts related to Network Operating System like User/Group Management, Disk Quotas, Server Setup (WEB Server, DHCP, DNS etc.) in Windows and Linux.

CO 3: This paper enables students to create and manage highly efficient networks using Microsoft Server product.

CO 4: This paper is highly recommended for students as it gives them an insight into comparing Windows Server products and Linux Server Solution in order to implement network solutions in organizations.

CO 5: Students can get many job opportunities related to Network Administrator in various industries/organizations.

Paper: MIT-105 Computational Problem Solving Using Python

CO 1: This paper is specially designed for providing the thorough knowledge of programming to students.

CO 2: Going from the basics to complete detail of the programming concept, this programme enables students to apply their own logics in computer system.

CO3: This paper is being widely used in various companies and MNCs, therefore the complete knowledge of this programme will help students to get through their training projects after placements.

CO4: Students can build up their own software projects by using the syntaxes and semantics of this programme.

CO 5: The basic foundation of this particular programme will raise the interest of students in other high level programming languages to accomplish the need of becoming a successful Software Developer

Semester-II

Paper: MIT-201 Mobile Computing

CO1: This paper provides a deep knowledge about the different wireless communication System.

CO2: Through this subject student came to know about the mobile radio Propagations and how a channel is allocated to each subscriber.

CO3: The GSM system for mobile Computing is also taught to students.

CO4: A complete description of SMS (Short Message Service) and its architecture is given to students through this subject.

Paper: MIT-202 Distributed Databases

CO1: This paper is highly specialized in M.Sc.(IT) which elaborate the future design and implementation in the field of networking.

CO2: This paper provides advance development in the field of networking, storing and fetching of information.

CO3: This helps in understanding and specialized networking techniques which ensure the processing of large information systems without any failures.

CO4: Students learn about remote network and server processing in which data is never placed in server but data is available to user as and when required.

CO5: This paper is having huge scope in large networks, data ware housing and data mining. Students 'gets very good option for becoming good network administrator.

Paper: MIT-203 Image Processing

CO 1: This paper will provide students useful and essential skills and experience to make career in creative professionals such as graphic designers, gallery managers, art curators, commissioning editors and art directors etc.

CO2: Having knowledge about this paper, students will get to know about the detailed functions of image processing software so that students can learn about restoration, manipulation and development of various Imaging techniques.

CO3: This paper provides knowledge to develop the layout and production design of newspapers, magazines, corporate reports, journals and other publications.

CO4: The advanced features of image processing are being used to develop motion picture and motivate students to work in television industry.

Paper: MIT-204 Fuzzy Systems

CO1:   This paper provides the detail knowledge of Automatic Sensor Controlled Systems to students.

CO2: Students get to learn about the fuzzy systems and fuzzy controllers which are mostly being used in modern automatic devices.

CO3: This paper is highly recommended for students in order to pursue research works also.

CO4: This paper enables students to apply their logics and knowledge in systems which are really near to human thinking and behavior.

CO5: This paper will make students understand that how human behavior is being rationalized by computer systems in robotics and live hardware systems based on sensor technologies.

CO6:   Students can get many job opportunities and new visions for research after getting through this paper.

Paper: MIT-205 Network Design and Performance Analysis

CO 1: Developing networking skills almost immediately places and to make a career in virtually any sector. All the industrial sectors like the financial services, transport, manufacturing, education, technology, Government, health care, hospitality, and retail and soon experience shortage of skilled networking specialists.

CO 2: Students can make a mark immediately in the field you desire. The Government sectors have considerable scope for networking technology. The Defense and Intelligence services need networking specialists regularly.

CO 3: The technology is such that you can choose to start your own business as well. Networking skill scan help you connect to other businesses thereby helping you to market your business and services efficiently.

Semester-III

Paper: MIT-301 Network Protocols

CO1:   This paper provides knowledge about how information is transmitted accurately and unambiguously across the systems.

CO2:   It inculcates students about the over view of creating IP addresses and their configurations

CO3:   This paper provides knowledge about different networking topologies, media, systems and their management

CO4:   Student scan use different protocols to ensure integrity and security of communication no funder lying network.

CO5:   This paper also helps in setting up procedures for sending and receiving messages, acknowledgement of receipt, congestion avoidance, error correction etc.

Paper: MIT-302 Advanced Web Technologies

CO 1:ASP.net supports multiple programming languages like C#, visual basic dot net, J#, C++ and service-oriented architectures.

CO 2: Student having proficiency in on programming languages can build one module of large application and can be used simultaneously with modules develop by other students having good hand in other programming language.

CO 3: ASP.net provide is reliable and flexibility. Student can develop applications for different devices like laptop, smart-phones, pocket PCs and so on using single language.

CO4:   ASP.NET drastically reduces the amount of code required to build large applications.

CO5:   Students can easily develop software using Wizards in Dot net framework.

CO6:   Students can get job easily related to software development

Paper: MIT-303LinuxAdministration

CO1:   Learning Linux Provides Good Job Opportunities to the students in IT sector.

CO2:   Students learns To Write Efficient, Effective Scripts with Documentation.

CO3:   As It Is Available Free of Cost and Can Easily Run on Older and Cheaper Computers   It provides Substantial Financial Savings.

CO4:   It Provides High Security. Using Linux means avoiding viruses and malware.

CO5:   Improves Problem Solving Skills of the students.

Paper: MIT-304 System Simulation

CO1:   This paper is really very efficient one in M.Sc. and provide students with great insight of newly systems and their simulations.

CO2:   This paper in reses the interest of students in the creation of newly computerized systems by first making their simulations.

CO 3:   By complete understanding of this paper students will be able to work with various MNCs, firms and organization helping in the manufacturing of new systems.

Paper: MIT-305 Microprocessor and Its Application

CO 1: A microprocessor is normally capable of many functions, such as word processing, calculation, and communication via Internet or telephone and this helps students to understand the detailed view of microprocessor about their functionality and their properties.

CO 2: Students can easily extend their knowledge of writing assembly code, for the x86 assembly language and they can understand how a machine interprets instructions at low level.

CO 3: This paper provides knowledge how a processor at the lower level receive input from the keyboards and the mice. Students can learn how and why memory segmentation in a process came into existence.

CO5: This also allows students to understand about the real life applications of the microprocessor.

Semester-IV Paper: MIT-401 Advanced Java Technology

CO1:   This paper is one of the specialized programme in M.Sc., which provides the detail knowledge of Java Programming Language.

CO2:   Students get to learn about the concepts of object oriented programming and Java Programming constructs.

CO3:   This paper enables students to implement commercial applications in Java & Java Applets.

CO4:   This paper is highly recommended for students in order to pursue career in software development.

CO5:   Student scan get many job opportunities and it can also act as a tool in research in some specialized fields.

Paper: MIT-402 Network Security

CO1:   This paper is highly specialized in M.Sc. (IT) which elaborate the various components involved in network security.

CO2:   This paper enables students to learn basic and advance concepts of most important component

i.e. personal level firewall and gateway level firewall.

CO3: Students are able to understand security concepts, security threats, security services and mechanisms to counter them.

CO4: This paper discusses advance methods in designing networks from security point of view.

CO5: This helps in understanding and choosing specialized networking security device UTM (Unified Threat Management) from a number of available devices in the market.

CO6: This paper is having larges cope in industry and research.

Paper: MIT-403Artificial Neural Network

CO1: This paper is highly specialized in M.Sc.(IT) which elaborate the future design and implementation in the field of networking.

CO2: It covers the present day requirement of Pattern recognition, Character recognition.

CO3: It closely resembles the human brain networking including learning, logistics, and recognitions and retaining in formation.

CO4: Now a days this programme is having great significance in all fields where specialization like human is required.

CO5: Students can get many research and job opportunity after pursuing this specialized programme.

Paper: MIT-405 P Project

CO1: The Project will make Students able to identify the requirements for the real world problems and correlating them which will make them able to develop software solutions for them.

CO2: Project Modules make students learn logically and analytically so that they can pursue their carrier in the field of Software Development in different MNCs and Industries.

CO3: This paper inculcates the important in students to make them a good Software Developer in order to make projects according to the need of customers and companies.

CO4: This paper motivates students to work in teams and manage the conduct of the research study in near future.

CO5: Students can make projects as websites and software in various different languages like JAVA, ASP. Net, PHP and Android also.

Post Graduate Diploma in Computer Applications

Semester-I

Paper: I PC Computing-I (MS-Office)

CO 1: This paper is the base subject for giving the basic fundamental concept of application software to the students.

CO 2: The motive of this subject is to give knowledge of basics of computer and MS-Offices to students so that students can pursue their carrier in the field of office automation and desktop publishing.

CO 3:This paper establish knowledge of creating effective documents, presentation slides and Excel Workbooks in students so that students can use their caliber in the field of banks, corporate sectors etc.

Paper: II PC Computing-II (Professional DTP)

CO1: This paper provides fundamental information about computer and its working. A number of devices that can be attached with a machine now a day are also discussed.

CO2: Students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO3: This paper includes Microsoft Office programs which enable the students to create professional and academic documents.

CO4: Students also learn about various accounting related operations in MS Excel and presentation skills using MS PowerPoint.

Paper: III Fundamentals of Computer and OS

CO 1: This paper provides fundamental information about computer and its working. A number of devices that can be attached with a machine now a day are also discussed.

CO 2: Students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO3: This paper includes Microsoft Office programs which enable the students to create professional and academic documents.

CO 4: Students also learn about various accounting related operations in MS Excel and presentation skills using MS Power Point which makes them able to work in field of Office Automation and Desktop Publishing as well.

Paper: IV Database Management System

CO 1: This paper is very significant for the graduate students as it delivers detail understanding of data base systems and its design.

CO 2: It is having big role in all types of industry/institutions because all kind of necessary data is to be stored in database.

CO 3: This paper also delivers the design and implementation of databases and generates opportunity for students to become data managers, Data base administrators and get jobs in any kind of business house.

CO 4: It provides opportunity for future development and research in the field of database techniques like data ware housing and data mining as these are the basic needs of all types of business now and in future.

Semester-II

Paper: I Network Concepts and Management

CO 1: This paper inculcates the complete knowledge of Networking in students which is the most essential and advantageous in the present scenario of Internet and Networking.

CO 2: Complete Understanding of the specified paper provides students with the information of Various Network Topologies, Network Protocols, Network Essentials and Network Controlling.

CO3: This paper will help students to get proper information about many Network Devices and their Uses so that students can use them in Real World also.

CO 4: Students will thoroughly study about the transmission media and to realize and compare different LAN, MAN a mend WAN Topologies.

CO 5: Studying the detailed information about the Internet Protocols will increase the ability in students to work in the real networking development techniques.

Paper: II Programming in C

CO 1: This paper provides the basic insight of programming skills to the students who are beginning

their course work in various Computer Programming Languages.

CO 2: C Programming acts as the base of Programming Languages which will thoroughly increase the interest of students in Programming Field.

CO 3:All Advanced Computer Programming Languages are belonging to the base concept of C Programming and Learning the basic concept of this course, will help students in Advance Languages also.

CO 4: This Language is being accepted as Universal Programming Language, therefore the concept understanding of this language will inculcate thorough knowledge of procedures of Programming Language in Students.

CO 5: This paper is specifically being used in a multitude of applications, including advanced scientific systems and operating systems

Paper: III Introduction to Scripting Language, Web Designing & Uses of Internet

CO 1: This paper work is highly efficient and recommended one for the provision of knowledge to students about Website Development and Software Development which will highly increase their opportunities to work in industries.

CO 2: This paper is the combination of many Sever Side and Client Side Programming Languages like CSS, Java Script, Java Servlets, ASP.net and PHP for the successful establishment of Website or Software.

CO 3: Students will get through the internal knowledge of Back- End and Front- End Processes using which they will be able to design their own Websites or Software.

CO4: This paper will also provide the information about the Data base Connectivity along with the given Front End website or software so that the students can learn about the Data Transfer Procedures forms Front-End to Back-End and Vice-Versa.

Paper: IV Multimedia Systems

CO 1: This paper is used to become graphic designers and by having knowledge of this subject, they have the desired skills in Drawing, Lay outing, Typography, Lettering, Diagramming, and Photography.

CO 2: This subject gives us knowledge to develop the layout and production design of newspapers, magazines, corporate reports, journals and other publications.

CO 3: Students can also create marketing brochures for services and products, promotional displays packaging, design distinctive logos for businesses and products.

Name of Programme: Diploma in Computer Applications

Semester-I

Paper : I Information Technology and Operating System

CO 1: This paper provides fundamental information about computer and its working. A number of devices that can be attached with a machine now a day are also discussed.

CO 2: Students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO 3: The study of Operating System helps students to analyse the memory management and its allocation policies which is the prime factor of consideration in every Operating System,

CO 4: This paper helps students to identify use and evaluate the storage management policies with respect to different storage management technologies of Operating Systems like Windows, Linux and UNIX.

Paper: II PC Computing-I

CO 1: This paper provides fundamental information about computer and its working. A number of devices that can be attached with a machine now a day are also discussed.

CO 2: Students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO 3: This paper includes Microsoft Office programs which enable the students to create professional and academic documents.

CO 4: Students also learn about various accounting related operations in MS Excel and presentation skills using MS Power Point which makes them able to work in field of Office Automation and Desktop Publishing as well.

Semester-II

Paper: I Database Management System

CO 1: This paper is very significant for the graduate students as it delivers detail understanding of database systems and its design.

CO2: It is having big role in all types of industry/institutions because all kind of necessary data is to be stored in database.

CO 3: This paper also delivers the design and implementation of databases and generates opportunity for students to become data managers, Data base administrators and get jobs in any kind of business house.

CO 4: It provides opportunity for future development and research in the field of database techniques like data ware housing and data mining as these are the basic needs of all types of business now and in future.

Paper: II PC Computing-II

CO 1: This paper is specifically providing complete knowledge about MS-Access to students and giving them thorough knowledge about the Database Establishment and Connection.

CO 2:MS-Access is being used in various big organizations, industries and MNCs for making the handling of data more simpler and much efficient and better understanding of this paper will help students to control this type of work in various Offices as well.

CO 3: Students get to learn about the process of creating Tables and making the concept of Database handling more presentable and understanding for the Software Developers as well.

B.A. /B.Sc. (Computer Science)/B.Sc. (Economics)

Semester-I

Paper: Computer Fundamental & PC Software

CO 1: This paper provides fundamental information about computer and its working. A number of devices that can be attached with a machine now a day are also discussed.

CO 2: After completing this paper, students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO 3: This paper includes Microsoft Office programs which enable the students to create professional and academic documents.

CO 4: Students also learn about various accounting related operations in MS Excel and presentation skills using MS PowerPoint which makes them able to work in field of Office Automation and Desk top

Publishing as well.

Semester-II

Paper: Programming Using C

CO 1: This paper provides the basic insight of programming skills to the students who are beginning their course work in various Computer Programming Languages.

CO 2: C Programming acts as the base of Programming Languages which will thoroughly increase the interest of students in Programming Field.

CO 3:All Advanced Computer Programming Languages are belonging to the base concept of C Programming and Learning the basic concept of this course, will help students in Advance Languages also.

CO 4: This Language is being accepted as Universal Programming Language; therefore the concept understanding of this language will inculcate thorough knowledge of procedures of Programming Language in Students.

Semester-III

Paper: Computer Oriented Numerical and Statistical Methods

CO 1:This paper provide the learning insights of Concept of Statistical Analysis of the Data to the students so that they can effectively and efficiently store the data inside the systems where it will be having a low cost and timing access easily.

CO 2: In the field of Computing, this course work will help the students to research and experiment about the statistical details of the data and perform mathematical calculations of the data as well.

CO 3: This paper give students complete knowledge to calculate various statistical calculation on Data like Calculating Mean, Median, Mode, Kurtosis, Moments and Regression.

CO 4: This paper work increases the critical and analytical strategies in students so that students can pursue their carrier in Research and Development Field.

Semester-IV

Paper: Data Structures & Programming Language Using C++

CO1: Students become able to select appropriate data structures as applied to specify problem definition.

CO2: Students learn about application of various data structure like stacks, queues, tree, graph, linked list etc. related to different operations.

CO3: This paper is highly necessary to learn and implement logics in computer science.

CO4: It also includes the various concepts related to data storage in computers.

CO5: Students learn to analyze and compare algorithms for efficiency.

Semester-V

Paper: Data Base Management System & Oracle

CO 1: This paper is very significant for the graduate students as it delivers detail understanding of database systems and its design.

CO 2: It is having big role in all types of industry/institutions because all kind of necessary data is to be stored in database.

CO 3: This paper also delivers the design and implementation of databases and generates opportunity for students to become data managers, Data base administrators and get jobs in any kind of business house.

CO 4: It provides opportunity for future development and research in the field of data base techniques like data ware housing and data mining as these are the basic needs of all types of business now and in future.

Semester-VI

Paper: Information Technology

CO 1: This paper provides the deep in sight to students about Information Technology and Networking so that students can understand the basic concepts of Internet and Computer Networks.

CO 2: This paper structure provides with the complete knowledge of Protocols, Topologies and Latest Technologies with the advancements in the field of Networking.

CO 3: This paper provides the knowledge of cables, connections, connectors and all the required technologies for Networking like IEEE, TCP/IP etc.

B.A. (Bachelor of Arts)

Computer Application (Vocational) Semester-I

Paper: Computer Fundamental & Pc Software

CO1: This paper provides fundamental information about computer and its working. A number of devices that can be attached with a machine now a day are also discussed.

CO2: After completing this paper, students become able to bridge the fundamental concept of computers with their present level of knowledge about computers.

CO3: This paper includes Microsoft Office programs which enable the students to create professional and academic documents.

CO4: Students also learn about various accounting related operations in MS Excel and presentation skills using MS PowerPoint which makes them able to work in field of Office Automation and Desktop Publishing as well

Semester-II

Paper: Programming Using C

CO1: This paper provides the basic insight of programming skills to the students who are beginning their course work in various Computer Programming Languages.

CO2: C Programming acts as the base of Programming Languages which will thoroughly increase the interest of students in Programming Field.

CO3:All Advanced Computer Programming Languages are belonging to the base concept of C Programming and Learning the basic concept of this course, will help students in Advance Languages also.

CO4: This Language is being accepted as Universal Programming Language, therefore the concept understanding of this language will inculcate thorough knowledge of procedures of Programming Language in Students.

CO5: This Paper Work is specifically being used in a multitude of applications, including advanced scientific systems and operating systems

Semester-III

Paper: Operating System 120

CO1: This Paper Work explains and describes about the important computer system resources and the role of operating system in their management policies to get a better understanding about the concept of various Process Management Techniques under different Operating Systems available.

CO2: The paper gives detailed description about the process and functions of Operating System in order to schedule, manage and control the processes going inside the system.

CO3: The study of Operating System helps students to analyze the memory management and its allocation policies which is the prime factor of consideration in every Operating System,

CO4: This paper helps students to identify use and evaluate the storage management policies with respect to different storage management technologies of Operating Systems like Windows, Linux and UNIX.

Semester-IV

Paper: Relational Data Base Management Systems &Oracle

CO1: This paper is very significant for the graduate students as it delivers detail understanding of data base systems and its design.

CO2: It is having big role in all types of industry/institutions because all kind of necessary data is to be stored in database.

CO3: This paper also delivers the design and implementation of databases and generates opportunity for students to become data managers, Data base administrators and get jobs in any kind of business house.

CO4: It provides opportunity for future development and research in the field of database techniques like data ware housing and data mining as these are the basic needs of all types of business now and in future.

Semester-V

Paper: Internet and Web Designing

CO1: This paper provides the understanding of various concepts related to Internet where students will learn about the Connection Establishment, configuring the network, trouble shoot the network etc.

CO2: Students learn about the various measures being used for securing the network along with the help of Internet Protocols and increase in the use various Security Firewalls

CO3: Paper gives suitable information to students in order to get maximized advantages from the network by implementing an accurate type of Topology and Connecting Computer System in proper Order.

CO4: Students can pursue their carrier in the field of Network Security and Network Coordination which is presently in high demand throughout the Industry.

Semester-VI

Paper: Business Data Processing

CO 1: This paper is specially designed for the final year students in order to provide them with the information of basic need of Computer in different companies and organizations so that students can work accordingly.

CO 2: Business Data Processing enables the students to understand the Latest terms and technologies being used in companies so that students can work under the Live Software of Payroll Systems, Enterprise Software, and Data Warehousing Software etc.

CO 3: This paper gives a better understanding to students about the working of Developer 2000 Software which is being used in Companies and Organizations for the handling of Employee Data.

implementing an accurate type of Topology and Connecting Computer System inproperOrder.

CO4: Students can pursue their carrier in the field of Network Security and Network Coordination-whichispresentlyin high demandthroughout the Industry.

Semester-VI

Paper:BusinessDataProcessing

CO 1:This paper is specially designed for the final year students in order to provide them with theinformation of basic need of Computer in different companies and organizations so thatstudentscanworkaccordingly.

CO 2:BusinessDataProcessingenablesthestudentstounderstandtheLatesttermsandtechnologies beingusedincompaniesso that they canworkundertheLiveSoftwareofPayrollSystems,Enterprise Software,andDataWarehousingSoftwareetc.

CO 3:This paper gives a better understanding to students about the working of Developer 2000SoftwarewhichisbeingusedinCompaniesandOrganizationsforthehandlingofEmployee

Data.

DepartmentofPhysics

Name of Programme:B.Sc.(Non-Medical)/(Computer Science)

Semester-I

Paper: Mechanics

CO1: Students will learn about different coordinate systems: Cartesian and spherical polar Co-ordinate systems and their practical applications to find various physical quantities.

CO2: Students will know how to reduce two body problem into one body problem.

CO3: Students will be able to understand motion of a body under central forces.

CO4: Students will become familiar with the concept of inertial and non-inertial frames.

Paper: Electricity and Magnetism

CO1: Students will learn about the basic ideas of vector calculus and their physical significance.

CO2: Students will understand the concept of Electric field and potential difference due to different types of distribution of charges.

CO3: Students will know about the magnetic properties of the material and their behaviour in the magnetic field.

Semester-II
Paper:Relativity and Electromagnetism

CO1: Students will be able to understand the special theory of relativity.

CO2: Further, they will have an idea about the concept of Minkowski space and four-vector formulism.

CO3: They will learn about Hall effect and its applications.

CO4: Students will understand about coupling of electrical circuits and their basic concepts.

CO5: Students will know about the fundamentals of E.M. Waves and response of different media to E.M. Waves.

Paper: Vibrations and Waves

Certainly! Here are your Course Outcomes (CO) with spaces added between each word:

CO1: Students will learn about the simple Harmonic Motion, free, damped and forced oscillators.

CO2: Students will understand the concept of Coupled oscillators.

CO3: They will learn about the concept of impedance matching for propagation of wave through different media.

Semester-III
Paper: Statistical Physics

CO1: Students will gain knowledge about the basic laws of statistical physics and its scope.

CO2: Concept of microstate, macro state and Phase space will be introduced to the students.

CO3: They will learn about the basic approaches of Maxwell Boltzmann, Bose Einstein and Fermi Dirac statistics.

CO4: Students will learn about the concept of entropy and its application to explain various natural phenomena.

CO5: Maxwell Thermodynamics relations and their applications in different processes will be introduced to the students.

Paper: Optics

CO1: Students will learn about interference of light by division of amplitude and wavefront.

CO2: Students will study the applications of interference of light in non-reflecting thin films and optical devices.

CO3: Concept of polarization and methods to polarize light will be introduced to them.

CO4: They will learn about construction and application of Nicol prism, Quarter and Half wave plate.

Semester-IV Paper: Quantum Mechanics

CO1: Students will learn about the formalism of Wave mechanics, Normalization and Probability interpretation of wave function.

CO2: They will study about the concept of wave particle duality.

CO3: The concept of Uncertainty Principle and its applications will be introduced to the students.

CO4: Students will be introduced to operator formalism and fundamental postulates of wave mechanics.

CO5: Students will study Schrodinger equation for free as well for particle subjected to forces. Moreover, they will learn to apply Schrodinger equation to various problems of Physics.

CO6: Students will gain knowledge about X rays, different methods of production of X rays and their interaction with material.

Paper: Atomic Spectra and Laser

CO1: Students will understand the one electron atomic spectra, concept of Zeeman effect, Spin-orbit coupling, Lande's g factor will be introduced to them.

CO2: Students will study about the spectra of many electron systems e.g. of Helium and Alkaline Earth Spectra.

CO3: Moreover, they will learn about the LS, JJ Coupling schemes.

CO4: Students will understand the fundamentals of Laser. They will be given knowledge about the basic condition required for the laser action.

CO5: They will learn about the principle, Construction and working of different lasers: Ruby laser, Nd

laser, He-Ne and Carbon dioxide laser. Further, they will study about the practical applications of lasers. Concept of Holography will be introduced to them.

Semester-V Paper: Condensed Matter Physics

CO1: Students will learn about the basics of crystal structure and symmetries operation in two and three dimensional crystals.

CO2: Experimental methods for crystal structure studies will be introduced to the students.

CO3: Students will be able to understand various reciprocal lattice, construction of Brillouin Zone in Two and three dimensions.

CO4: Concept of Phonons will be introduced to the students. Moreover, they will be able to calculate the density of modes of vibrations.

CO5: Students will learn about the basic concepts of band theory and differentiate between conductors, semi-conductors and insulators using Kronig-Penny model.

Paper: Electronics

CO1: Students will study about the junction diodes and their applications.

CO2: Students will learn about transistors and the characteristics of their different configurations.

CO3: Students will gain knowledge about parameters and their use for amplifier analysis.

CO4: They will understand the concept of feedback and use of negative feedback in amplifiers.

CO5: They will understand Barkhausen condition for sustained oscillations as well as construction and working of different types of oscillators.

Semester-VI Paper: Nuclear Physics

CO1: Students will learn about the constituents of nucleus and various properties of nucleus.

CO2: Students will be introduced with the various modes of decay of radioactive nuclides and the laws governing the radioactive decay.

CO3: Students will gain knowledge about different types of nuclear reactions, their reaction cross section and conservation laws followed by them.

CO4: They will be explained different Nuclear models - Liquid drop model and shell model.

Paper: Radiation and Particle Physics

CO1: Students will be introduced to various types of accelerators used for accelerating the charge particles.

CO2: They will learn about Large Hadron Collider, which is world's largest accelerator.

CO3: Different modes of interaction of heavy charge particle with matter will be introduced. They will learn how the incident particle loses its energy when it enters into the matter.

CO4: Students will learn Bethe-Bloch formula which tells about the energy loss per unit length when a charged particle enters into the matter.

CO5: Students will be introduced to various ways of interaction of gamma rays with matter. Photoelectric effect, Compton effect and pair production processes will be explained to them.

Departmentof Chemistry   125

Name of Programme:B.Sc. (Medical)/ (Non-Medical)/ (Computer Science)

Chemistry Semester-I and II
Paper: Inorganic Chemistry

CO1: This course imparts essential knowledge regarding Quantum mechanical approach to atomic structure, periodic properties, general characteristics of all the elements, their compounds, structure and preparation methods of compounds, chemical bonding, semi-conductors and defects in solids.

CO2: Students get a thorough knowledge on overall inorganic chemistry. They learn role of metal in living system.

CO3: Students learn modern theories of Acids and Bases.

Paper: Organic Chemistry

CO1: This course make students capable of understanding and learning nomenclature and classification of organic compounds and basic concepts of organic chemistry like – reaction mechanism, intermediates and attacking reagents etc.

CO2: Students learn preparation and properties of organic compounds like Hydrocarbons, Haloalkanes and Aromatic compounds.

Paper: Physical Chemistry

CO1: This course enables the students to learn about the various states of matter (colloids, gaseous, liquid and solutions) with their properties, inter-particle forces and laws governing these states.

Paper: Practicals

CO1: Course develops the skills to determine physical constants like melting points and boiling points.

CO2: Develops skill of crystallization.

CO3: Develops skill regarding systematic qualitative analysis of inorganic mixtures containing two acidic and two basic radicals by semimicro method of analysis.

CO4: Students learn and perform experiments related to physical chemistry i.e. Surface tension, viscosity Chemical Kinetics and Thermodynamics.

Semester-III and IV

Paper: Inorganic Chemistry

Students learn about:

CO1: Advanced Theories on coordination Chemistry, Structure, Bonding and Stereochemistry of important Coordination Compounds.

CO2: Redox behaviour of elements. CO3: Non-Aqueous solvents.

CO4: Chemistry of Lanthanides and Actinides. CO5: Bioinorganic Chemistry.

Paper: Organic Chemistry

Students are imparted a thorough knowledge about:

CO1: Modern Aspects of stereochemistry.

CO2: Synthesis and properties of some important class of organic compounds with mechanism. CO3: Organometallic compounds.

CO4: Heterocyclic compounds.

Paper: Physical Chemistry

Students get acquainted with the knowledge of:

CO1: Basic concepts and Laws of Thermodynamics CO2: Distribution Law

CO3: Chemical and Phase Equilibrium

Paper: Practicals

Students are exposed to the skills of:

CO1: Techniques of Thin Layer Chromatography

CO2: Quantitative estimations of different ionic species using different branches of Volumetric and Gravimetric Analysis

CO3: Qualitative analysis of organic compounds with synthesis of their derivatives and physical constant determinations.

Semester-Vand VI
Paper: Inorganic chemistry
Students learn:

CO1: Crystal Field Splitting in coordination complexes, their stability, colour and magnetic properties and use of magnetic moments for interpretation of their structures.

CO2: Electronic transitions, selection rules and Term symbols.

CO3: Thorough knowledge of Organometallic chemistry.

Paper: Organic Chemistry

Students are introduced to:

CO1: Different spectroscopic methods of analysis which includes UV, IR & NMR techniques.

CO2: Study of Carbohydrates, Polymers, Organosulphur compounds, Amino acids, Proteins, RNA and DNA.

CO3: Synthesis of different organic compounds via enolate ions.

Paper: Physical Chemistry

Students are exposed to the study of:

CO1: Various forms of electrochemical cells.

CO2: Conductance and related laws.

CO3: Nuclear reactions

CO4: Physical aspects of various branches of Spectroscopy.

CO5: Quantum mechanics

CO6: Various types of Crystal Systems

CO7: Photochemistry

Paper: Practical

Students are introduced to the techniques of:

CO1: Synthesis of organic and inorganic compounds

CO2: Column chromatography

CO3: Various physical chemistry experiments related to conductometry and refractometry.

CO4: Rast method, Distribution Law and Adsorption Isotherm

B.Sc.(Bio technology) Course Out comes
Chemistry Semester-I and II
Paper:BT-3Inorganic Chemistry
This course provides detailed knowledge about:

CO1: Coordination compounds and various theories like VBT, CFT & MOT explaining the bonding in these compounds.

CO2: Macrocyclic ligands, Carbonyl compounds, Bioinorganic compounds like Haemoglobin, Myoglobin, Carboxypeptidase chlorophyll etc. and the role of metal ions in these compounds.

Paper: BT-4 Organic Chemistry

CO1: This paper provides detailed knowledge about all types of Isomerism i.e Conformational, Geometrical and Enantiomerism, Sequence rules for E, Z or S, Specification to the compounds, Structures, Nomenclature, preparation methods and properties with mechanism of different functional groups.

Semester-III and IV Paper: Physical Chemistry

This course provides detailed knowledge about:

CO1: Chemical thermodynamics, Solutions, various types of solutions, colligative properties, Von't Hoff factor, Phase equilibria, various phase diagrams.

CO2: Electrochemical cells their types, Nernst Equation.

CO3: Chemical kinetics and Rate order Equations.

Semester-V and VI Paper: Spectroscopy

This course provides detailed knowledge about:

CO1: UV visible spectroscopy

CO2: Infrared spectroscopy

CO3: Nuclear, Magnetic Resonance Spectroscopy

CO4: This course helps in structure elucidation of newly synthesized compounds.

Department of Zoology

B.Sc. Medical
Semester-I and II Paper:I A Cell Biology

CO 1: To acquaint students with the central role of cell in the biological organization.

CO 2: To educate students about the structure and function of various cell organelles along with their molecular interaction within and out of the cell.

CO 3: Students are provided the knowledge regarding the basic techniques such as microscopy (light, phase contrast and electron microscopy), fixation and staining techniques, used in the study of cell and its abnormalities as well as the principle of these techniques.

CO 4: Students are educated about the cellular transformations leading to the development of cancer and the cellular level of immunity.

Paper: IB and II B Biodiversity

CO 1: To acquaint students with different levels of biological diversity and the evolutionary links between different phyla.

CO 2: To educate students about the scientific classification of invertebrate fauna and equip them with the ability to recognize the organism using the taxonomic characters of particular phylum.

CO 3: Students are provided the knowledge regarding morphological, anatomical and physiological features of type specimens of each phylum along with their economic importance.

CO 4: Introduction to the pathogenic organisms, their life cycle including the larval stages, mode of transmission, their pathogenicity and the parasitic adaptations.

CO 5: To create interest for preparation of natural compost out of kitchen and garden waste such as vermicomposting by using earthworms.

CO 6: To stimulate curiosity among the students regarding social life in insects such as honey bees and termites and educate them about the importance of coordination and social behaviour in the living world.

Paper: IIA Ecology

CO 1: To educate students about the basic principles, subdivisions and scope of ecology in biology, environmental sciences and the various challenges faced by the relevant parts of social sciences.

CO 2: To create awareness among the students regarding the structure and functioning of ecosystems, the distribution and occurrence of living organisms in the physical environment, the complexity of interactions between organisms and their environments.

CO 3: The students acquainted with the components of major ecosystems of the world, ecological energetics, ecological succession, biogeochemical cycles, productivity and concepts of limiting factors.

CO 4: The students are provided information regarding challenges posed by different environmental conditions and the various adaptations acquired by the organisms to survive in the particular habitats.

CO 5:Curiosity of students is being aroused towards inter and intra specific interactions such as commensalism, mutualism, parasitism and predation occurring among the organisms.
CO 6: Awareness is created among the students regarding the causes, impact and control measures of increasing environmental pollution.
Semester-III and IV
Paper: III A (Evolution)

CO 1: Understand the central role of evolution in describing the origin and diversification of biodiversity, its maintenance and how we should conserve it or methods of its conservation.

CO 2: To acquaint students with basic concepts of origin of life, the theories and evidences of evolution, concepts of micro, macro and mega evolution.
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CO 3: To educate students about the eras and geological time scale, evolutionary rate, emergence of various species, origin and extinction of reptiles with special reference to climate change and the evolution of man.

CO 4: Students are provided the knowledge regarding fossils, its types and the significance of fossils in analysing the evolution of various life forms in respective eras and the factors responsible for their extinction.

CO 5: Students are educated about the concept of adaptive radiations by with the help of peculiar examples, various adaptations, migration and parental care shown by various species.

Paper: IIIB Biodiversity-III

CO 1: To educate students about the hierarchy and diversity of chordates, basic characteristic features of chordates and the organisms showing affinities with both Chordates and Non-chordates.

CO 2: The detailed knowledge of structural organization and functioning of various systems in organisms belonging to different phyla, the type study of a representative specimen of each phylum is provided to the students.

CO 3: Stimulate curiosity among the students regarding social life in insects such as honey bees and termites and educate them about the importance of coordination and social behaviour in the living world.

CO 4: The students are imparted knowledge regarding the adaptations and economic importance of specific vertebrates.

Paper: IV A Biochemistry

CO 1: To educate students about the basic principles and chemistry of living organisms, the scope of biochemistry in clinical diagnosis, manufacturing of biological products and treatment of diseases.

CO 2: To familiarize the students to various biochemical pathways occurring in living systems, the importance of biomolecules.

CO 3: To create awareness among the students regarding the biochemical functioning of human body, its organs, and the cells of which they are composed.

CO 4: The students are acquainted with the structure and functions of macromolecules such as carbohydrates, lipids, proteins and nucleic acids as well as the nature and classification of enzymes including the role of coenzymes in the normal functioning of enzymes.

Paper: IVB Animal Physiology

CO 1: To educate students about the basic principles and fundamentals of animal physiology.

CO 2: The students are acquainted with the components of major ecosystems of the world, ecological energetic, ecological succession, biogeochemical cycles, productivity and concepts of limiting factors.

CO 3: The students are provided information regarding the detailed concepts of various physiological processes such as digestion, respiration, excretion, circulation, etc. occurring in the human body which is crucial for its survival.

CO 4: Curiosity of students is being aroused towards coordination and integration of nervous system with endocrine system.

CO 5: Awareness is created among the students regarding the physiology of behaviour, learning and reasoning.

Semester-V and VI

Paper: VA Developmental Biology

CO 1: To introduce the students to the fundamentals of developmental biology, various stages in the development of embryo and gametogenesis.

CO 2: The students are familiarized with the role of organizer and inducers in the development of embryo, the basic concepts of determination, differentiation and gastrulation.

CO 3: The students are provided information regarding the formation of foetal membranes, their role, and development of frog, chick and rabbit up to three germinal layers, their fate maps and the nature and physiology of placenta.

CO 4: The students are equipped with the knowledge of metamorphosis, regeneration, ageing and death.

Paper: VB Genetics

CO 1: To familiarize students with the central role of genetics in the study of biology and the life of an organism.

CO 2: The students are provided the information regarding genetic variation through crossing over, recombination and linkage, the concepts of multiple alleles, qualitative and quantitative multiple factors, their inheritance, non-allelic gene interaction and modifications of Mendelian ratios.

CO 3: The students are able to understand the basic concepts of gene and genetic code, replication and transcription of DNA, expression of genes and their regulation.

CO 4: The students are also acquainted with the extranuclear inheritance and spontaneous and induced mutations, physical and chemical mutagens, somatic mutations and carcinogenesis.

Paper: VI A & B Medical Zoology & Medical Laboratory Technology

CO 1: The students are introduced to the terminology of Parasitology, various pathogenic microbes, their life history, and mode of infection, pathogenicity with reference to man; prophylaxis and treatment.

CO 2: The students are familiarized with laboratory techniques including histopathology, staining techniques, culture media, sterilization and disinfection. 132

CO 3: The students are equipped with the knowledge of laboratory safety rules, hazards and precautions during laboratory investigations and procedure of collection, transportation and preservation of different clinical samples.

CO 4: The students are also acquainted with Haematology, anticoagulants (merits and demerits), Romanowsky's stains, total RBC count, erythrocyte sedimentation rate, TLC, DLC, platelet count.

CO 5: The introduction to human defence mechanisms, serodiagnostic assays and vaccines and their use in diagnosis, treatment and prevention of occurrence of diseases.

Department of Botany

B.Sc.(Medical)
Semester-I
Paper: Diversity of Microbes

CO1: This course will facilitate students to understand General characters, classification and economic importance, important features and life history of various genera of Algae.

CO 2: To facilitate students to note down different characteristics features of various classes of micro-organisms under Bacteria and viruses and also give in detail regarding their life cycle and economic importance.

CO3: To make them familiar with different characteristics features of various classes of Fungi like Mastigomycotina, Zygomycotina and Ascomycotina, Basidiomycotina etc.

Paper: IB: Diversity of Cryptogams

CO1: This course will aid students to understand general characters, classification and economic importance, important features and life history of Bryophyta.

CO2: They will be taught to general characters of different genera under class Hepaticopsida.

CO3: This course will help students to understand general characters of genera under class Anthocerotopsida and Bryopsida.

CO4: This course will assist them to be acquainted with General characters, classification and economic importance, important features and life history of various genera of Pteridophyta.

CO5: This course will facilitate students to understand general characters of various genera of Pteridophyta.

Semester-II

Paper: IA Cell Biology

CO1: To make them learn basic level of structural organization and function of Nucleus.

CO2: The students will understand extra nuclear Genome.

CO3: To make students well versed with Chromosome Organization.

CO4: They will learn about various chromosome alterations.

CO5: This course will make students well versed with cell wall and cell membrane.

Paper: IB Genetics

CO 1: To make them learn fine structure of DNA, the Genetic Material.

CO 2: The students will understand Genetic regulation of Cell division.

CO3: To make them familiar with Regulation of Genetic expression.

CO4: To make them acquainted with genetic variations.

CO5: This course will make students well versed with DNA damage and repair structure.

Semester-III

Paper: A Structure, Development and Reproduction in Flowering Plants

CO1: To illuminate the students to understand diversity and branching in flowering plants.

CO2: This course will help students to understand the shoot system and various tissues present in it.

CO3: To simplify the students about the general structure of wood and their variations.

CO4: To explain the students about the Origin, development, arrangement and diversity in size and shape of leaf.

CO5: To understand the various adaptations of leaves in relation to photosynthesis.

Paper: B Structure, Development and Reproduction in Flowering Plants – II

CO1: They will come to learn root system in plants.

CO 2: To give explanation about vegetative reproduction and structure of flower.

CO 3: To give details to understand structure of male and female gametophyte.

CO 4: To illuminate students to understand mechanism of double fertilization and structure of seed.

Semester-IV
Paper:IV A Diversity of Seed Plants and their Systematic -I

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CO 1: This course will help out students to know characteristics of seed plants.

CO 2: To know general features of gymnosperms and their classification.

CO 3: The students will learn geological timescale and fossilization.

CO 4: This course will help students to know morphology of vegetative and reproductive parts in Pinus and Cycas, Ephedra and Ginkgo.

Paper: IVB Diversity of Seed Plants and their Systematics – II

CO 1: This course will assist them to be acquainted Angiosperm taxonomy.

CO 2: They will be taught different components of classification.

CO 3: They will be well versed with Botanical nomenclature.

CO 4: They will learn different classification system.

CO 5: The students will get information about Diversity of flowering plants as illustrated by members of the different families.

Semester-V

Paper: VA Plant Physiology

CO 1: To describe the students about Plant-Water Relation.

CO 2: To facilitate students about different steps Mineral Nutrition in plants.

CO 3: To make clear the students about Transport of Organic Substances in plants.

CO 4: To simplify the students about Photosynthesis, Photorespiration CAM process.

CO 5: To help students to know growth and development in plants.

Paper: VB Biochemistry and Biotechnology

CO 1: They will learn basics of enzymology.

CO 2: To understand different Respiration process in plants.

CO 3: To recognize different steps in nitrogen and Lipid Metabolism.

CO 4: They will understand different aspects of genetic engineering.

CO 5: This course will help students understand basic aspects of biotechnology.

Semester – VI

Paper: VIA Ecology

CO 1: To familiarize students to understand Plants and different components of environment.

CO 2: To give details study about Community and population Ecology.

CO 3: This course will help students to understand different biotic and abiotic components of ecosystem.

CO 4: To give details the students about Biogeographical Regions and Vegetation types of India.

CO 5: This course will help students to understand landscape ecology.

Paper: VIB Economic Botany

CO 1: The students will learn different food plants.

CO 2: To familiarize students to understand source of fibres and vegetable oils.

CO 3: The main objective is to understand different source of spices.

CO 4: To make them to understand importance of different medicinal plants.

CO 5: This course will help the students to understand different sources of beverages and rubber in our life.

Department of Biotechnology

Name of Programme: B.Sc. Biotechnology

Course outcomes: Semester-I

Paper: BT-8 General Microbiology-A

CO 1: The students will be acquainted with the basic concept of Microbiology and its relevance in daily life.

CO 2: Learners will be able to understand the basic techniques in Microbiology such as bright field, dark field, phase contrast, fluorescence & immunofluorescence and electron microscopy.

CO 3: The students will learn about the general features of different microorganisms like bacteria, viruses, fungi etc.

CO 4: Students will be able to understand the various biochemical and metabolic characteristics of microorganisms.

CO 5: Students will learn the different methods of bacterial classification.

Paper: BT-9 Biochemistry A

CO 1: The students will learn the basic concepts of biochemistry and its role in plant and animal life.

CO 2: Further, they will be able to understand the importance of biomolecules such as carbohydrates in daily life.

CO 3: Students will be able to learn various procedures for determining sugars, carbohydrates, etc in various samples.

CO 4: Awareness will be created among students to study the importance of water in life.

Paper: BT-5 Computer & Bioinformatics Fundamentals

CO 1: The learners will be acquainted with the basic concept of computers and Ms-Office: word, Excel, Power-point.

CO 2: Students will explore various Databases at NCBI, EMBL, DDBJ.

CO 3: Students will be able to understand the GenBank Format, FASTA format etc.

CO 4: Students will learn the various sequence alignment tools in bioinformatics.

Semester-II

Paper: BT-8 General Microbiology-B

CO 1: The students will learn about the process of microbial growth.

CO 2: Students will be acquainted with the various methods used for cultivation of different bacteria and life cycle of various plant and animal viruses.

CO3: The learners will be able to understand the various diseases and their mechanism caused by microorganisms.

CO4: Students will learn about the different characteristics and mechanism of various fungal diseases, their mechanism of action, and diagnosis.

Paper:BT-9 Biochemistry-B

CO 1: Students will be educated about the importance of proteins and peptides; their types and chemistry.

CO 2: Students will be acquainted about basic types of lipids: their types and study various properties of lipids and waxes.

CO 3: Students will be provided with knowledge to understand the different types of vitamins and their role in human health and their IU recommended doses and deficiency diseases associated with vitamins.

CO 4: The students will be made aware about how to perform various tests for detection of proteins, lipids etc.

Semester-III

Paper: BT-3 Biochemistry-III

CO 1: The learners will understand the basic concept of metabolism.

CO 2: Students will learn about the various metabolic pathways of carbohydrate metabolism and their regulation.

CO 3: Students will be able to understand the concept of electron transport chain and oxidative phosphorylation.

CO 4: Students will learn and perform different processes used for the Separation of lipids using various chromatography techniques**.**

Paper:BT-7Agro and Industrial Applications of Microbes-A

CO 1: Students will learn about the basic concept of agro-industrial microbiology.

CO 2: Students will be able to learn about the different approaches used for genetic manipulations of microorganisms.

CO 3: Students will be able to identify various industrially important microbes, their isolation, screening, selection, and identification.

CO 4: Students will understand the concept of microbial association and their interaction with plants and role of microbes in sustainable agriculture.

Paper:BT-4 Cell biology–A

CO 1: Students will learn about the unit concept of life that is cell and its biology.

CO 2: The students will be made aware of the basic cell organelles such as Golgi complex, mitochondria, nucleus, etc.

CO 3: Awareness will be created among students about the microscopic structure of cell organelles and basic concepts of dichotomy.

CO 4: The students will be made aware of various methods of cell division i.e. mitosis and meiosis.

Paper:BT-6 Genetics

CO 1: Students will be able to understand the concept of chromosomes and their structure.

CO 2: Learners will be able to study the Mendel's Laws of Inheritance and interaction of genes.

CO 3: Students will also learn about the concept and significance of Linkage and crossing over.

CO 4: Awareness will be created among students to learn about basic microbial genetics.

CO1: Students will explore the study of Immune system.

CO 2: The learners will be acquainted with the various cells and organs of immune system.

CO 3: The students will learn the concept of immunogenicity along with action of various immunoglobulins.

CO 4: The students will get detailed knowledge about MHC molecule along with cell receptors.

Semester-IV
Paper:BT-3 Bio chemistry–IV
CO1: Students will understand the metabolic pathways of lipid catabolism and its regulation.CO2: Students will be able to learn about the concept of lipid anabolism.

CO 3: Students will understand various metabolic pathways of amino acid metabolism along with its regulation.

CO 4: Students will understand the detailed concept of nucleic acid metabolism.

Paper:BT-5 Immuno technology

CO 1: The students will study the concept of T-cell subsets and surface markers along with the concept of monoclonal antibodies.

CO 2: The students will become aware about various immunological techniques like Immunodiffusion, ELISA, RIA.

CO 3: The students will be able to understand immunopathological consequences of parasitic infections, immune invasion and how to protect our immune system from such pathogenic infections.

CO 4: Learners will be able to understand the concept of immunization and recombinant vaccines and latest discoveries related to recombinant vaccines.

Paper: BT-6 Molecular Biology

CO 1: The students will learn the Molecular basis of life: DNA and its replication.

CO 2: The learners will be able to understand the concept of DNA recombination molecular mechanisms.

CO 3: Students will learn the Process of transcription and translation in organisms.

Paper: BT-8 Enzymology

CO 1: Detailed knowledge will be imparted to the students regarding the nomenclature, classification and characteristics of enzymes.

CO 2: Concept clearance will be provided about the mechanism of enzyme action and functional group identification at active site.

CO 3: They will be provided knowledge about enzyme kinetics.

CO 4: Students will be able to learn enzyme inhibition, effect of pH and temperature on rate of enzyme action.

Paper:BT-7 Agro and Industrial Applications of Microbes-B

CO 1: Students will learn about the general characteristics of industrial and agroindustrial microbes and microbes involved in antibiotics production.

CO 2: Students will learn about the various mechanisms involved in the production of different microbial products like wine, beer, etc.

CO 3: Students will be provided the knowledge related to microbial processes in agrobiotechnology like BT crops, etc.

CO 4: Students will be able to learn about the different microbial processes in industrial biotechnology.

Paper: BT-4 Cell biology–B

CO 1: Students will be made aware about the different cell organelles like SER, RER, etc.

CO 2: The students will be made aware about the basic functions of the cell organelle.

CO 3: Awareness will be created among students about the cell division and its mechanism.

CO 4: The learners will be able to study various methods of cell differentiation.

Semester -V
Paper:BT-5 Bioprocess Engineering- A

CO1: Students will learn about the fundamental principle of bioprocess engineering and different types of microbial cultures.

CO2: The learners will be acquainted with the various mechanisms of microbial growth kinetics.

CO3: The students will learn the process of external and internal feed basic system of various microbial creatures.

CO4: Students will provide the knowledge related to the importance of sterilization in bioprocess Engineering.

Paper: BT-3 Animal Tissue Culture

CO1: The students will be made aware of the basic concepts of animal biotechnology, animal cell culturing.

CO2: Awareness will be created among students regarding various cell lines and their characteristics.

CO3: Students will be able to perform isolation of DNA and RNA from animal tissues and to analyze the DNA by electrophoresis and spectrophotometrically.

CO4: The students will be made aware about how to analyze the various types of stem cells and their role in differentiation and organ culturing.

Paper: BT-1 rDNA Technology-A

CO 1: Concept clearance about the molecular techniques like isolation of DNA from bacteria and then analysing it by using restriction enzymes and spectroscopy will be provided to the students.

CO2: The students will be made aware of various types of vectors such as lambda, plasmid etc.

CO3:They will be able to learn various techniques used for transformation like electron gun, microinjection etc

CO4:Students will also explore various types of DNA sequencing techniques used in modern era.

Paper:BT-4 Patent Laws in Biotechnology

CO1:Conceptual knowledge will been hanced regarding the Indian patent system, its history, further amendments objectives and along with patenting agencies will be enlisted.

CO2:Students will be able to understand the format of the writing the patent and its specifications. Further, added guide lines include patentee rights, post grant opposition, infringement, etc.

CO3:   Students will be acquainted regarding the patenting system in biotechnology and articles related to it.

CO4:   Awareness will be created about the risks associated with the release of genetically modified micro organisms, ethical issues in biotechnology, ecological impact and legal aspects of patenting.

Paper:BT-6Biophysical and Biochemical techniques–A

CO1:   The students will earn about centrifugation in detail which includes its principle, theory, types and application.

CO2:The students will be acquainted with chromate graphic technique; its principle types and application.

CO3:The learner will be provided knowledge regarding the advanced chromate graphy techniques like HPLC,GLC.

CO4:Detailed knowledge will be provided about spectroscopy, and instrumentation of NMR and ESR will be taught.

Semester-VI

Paper:BT-5Bioprocess Engineering-B

CO1:The students will be acquainted with the various features of different bioreactors and its kinetics.

CO2:The students will learn about the various control and measurement equipment of bioreactors.

CO3:The students will earn about the basic concept of down streaming processing.

CO4:   Students will be able to understand the various methods of ETP and fermentation economics.

Paper:BT-3Animal Biotechnology

CO1:   The students will be made aware of the various types of cell lines and their characteristics.

CO2:   Students will learn the various types of methods for cell transformation.

CO 3: The students will be able to understand the concept of PCR and types of PCR. Further, they wills get to know regarding animal genetic engineering and production of various types of animal products.

CO4: The students will be further made to learn isolation of RNA from blood, southern blotting etc.

Paper:BT-6 Biophysical and Biochemical techniques–B

CO1: The students will be provided the knowledge of mass spectroscopy, MALDI-TOF and MALDI-Q, its application and further fluorescence microscopy will be discussed.

CO2: Knowledge of students will be enhanced regarding electrophoresis, its types, principle, theory and applications.

CO3: The students will be provided knowledge regarding 2D gel and capillary electrophoresis and its applications.

CO4: The learners will taught the radioisotopic techniques which includes concept of radioisotopy, the theory and safety rules for radioisotopic studies.

Paper:BT-4 Intellectual Property Rights and Entrepreneurship

CO1: The students will be imparted the knowledge of IPR; its history, benefits, problems and management.

CO2: Students will be provided knowledge regarding World Trade Organization, its principle, objective, structure, functions and its related provisions, GATT.

CO3: Learners will be acquainted with TRIMs, TRIPs; its agreement, principle and objective, Berne convention, Budapest Treaty, WIPO.

CO4: The students will be given the knowledge regarding entrepreneurship; its characteristics.

Paper: BT-1 rDNA Technology-B

CO1: Awareness will be created among students about study of various types of vectors and their characteristics (BAC, YAC, TAC).

CO2: The students will be made aware about the concept of genomic cloning and various types of lambda vectors used for the same.

CO3: Students will be able to learn about various types of sequencing methods such as max Gilbert method, Sanger's method.

CO4: Students will be able to learn the preparation of competent cells and transform the same and learn gel electrophoresis etc.

Department of Fashion Designing

B.Sc. Fashion Designing
Semester –I
Paper I: Basic of Design and Illustration
CO 1: To help students to understand and define design fundamental, elements and principles of design.
CO 2: To enable students to demonstrate figure sketching and drawing.
CO 3: To understand the what, why and how of illustration techniques.
CO 4: Students will be able interpret Fashion Design concepts and colour theories.

Paper II: Concept of Fashion
CO 1: Students will be able to find and discuss concepts related to the historical background of fashion.
CO 2: Students will be able to interpret, assess, purpose and apply various techniques related to drafting, draping.
CO 3: Students will be able to interpret different fashion cycles and theories of fashion.
CO 4: Students will be able to interpret social and psychological aspects of clothing.

Paper III: Basics of Sewing-I
CO 1: Students will able to define and construct various sleeves e.g. Puff, raglan, kimono etc.
CO 2: Students will able to explain Yokes with fullness and without fullness.
CO 3: Students will able to understand and translate Construction of collars – Flat and rolled, peter-pan collar.
CO 4: Student will be able to make use of Sewing machines and other basic sewing techniques used for Garment formation.

Paper IV: Basics of Computers
CO 1: Students will able to Define and understand the basics knowledge of computers.
CO 2: Students will learn to compare between an operating system and an application program.
CO 3: Student will be able to identify General concept of MS-Word.

CO 4: Student will be able to analyse Computer applications in various fields of fashion Industry

Paper V: Fibre to Fabric

CO 1: Students will able to tell and identify different types of Fibres and yarns.

CO 2: Students will be able to identify different fibres to know the fabric type with Microscopic appearance, burning test and solubility test.

CO 3: To extend student's knowledge of fibre, sources of fibres, their definitions and properties

Semester-II

Paper I: Traditional Textiles

CO 1: Students will able to summarize, differentiate & learn types of carpets, coloured woven & printed textiles of India.

CO 2: Students will be able to analyse various effects, texture and basics of art and design world.

CO 3: To extend student's knowledge of traditional design and motifs of textiles.

CO 4: To demonstrate applications of the traditional motifs on different textiles.

Paper II: Fabric Construction

CO 1: Students will be able to discover various techniques of weaving, knitting, felting & bonding.

CO 2: Students will analyse different types of decorative fabric construction techniques.

CO 3: To impart knowledge of fabric manufacture and fabric properties.

CO 4: To enable students to understand fabric structures and to analyse them.

Paper IV: Basics of Computers

CO 1: Students will be able to apply the Professional presentation formations, different views of PowerPoint & animation effects.

CO 2: Student will be able to explain basic Concepts of PowerPoint, CorelDraw & Photoshop.

Semester-III

Paper I: Fashion Design and Illustration

CO 1: Student will formulate the process to work from concept to finished products, including knowledge of paints and surfaces.

CO 2: Students will conclude the various design details and their use in fashion/textiles.

CO 3: Students will be able to analyse two dimensional and three-dimensional images.

CO 4: To enable students to gain knowledge of figure sketching and drawing.

Paper II: Colour Concepts & Coloration   144

CO 1: Students will understand importance of colour&colour schemes.

CO 2: Students will be able to originate different types of dyeing techniques on fabrics.

CO 3: To impart knowledge of fashion design concepts.

CO 4: To enable students to develop practical skills of printing

Paper III: Pattern Making & Garment Construction

CO 1: Students will be able to develop commercial paper patterns & make style reading sheets.

CO 2: Students will able design and construct garments – Salwar suit, blouse, Petticoat.

CO 3: Student will be able to relate different aspects of pattern making and grading.

CO 4: Student will be able to develop the concept of pattern making and draping.

Paper IV: Needle Craft

CO 1: It enables the students to classify methods of surface ornamentation on fabric using different techniques to produce value added products.

CO 2: Students will learn to develop and explain practical skills in needle craft techniques

CO 3: Students will be able learn methods of surface ornamentation of fabric using different techniques to produce value-added products.

CO 4: To enable the students to develop practical skills in needle craft techniques.

Paper V: Knitting Technology

CO 1: Students will be able to demonstrate types, characteristics & structure of knitted products

CO 2: Students will summarize the knowledge of knitted garments.

CO 3: Student will be able to analyse about knitting technology.

CO 4: To enable students to develop practical skills of knitting.

Semester- IV

Paper I: Fashion Design and Illustration (CAD)

CO 1: Students will interpret fashion design concept on computer.

CO 2: Students will gain working knowledge of Corel draw software and will apply hands on

knowledge on details and croquis on computer.

CO 3: To understand the fashion design concepts on computer.

CO 4: To acquaint students with perception of CAD based application in fashion designing

Paper II: History of Costumes

CO 1: Students will be able to build and develop costumes for men and women – Indus valley civilization, British period, Mauryan, Mughal period etc.

CO 2: Students will summarize dresses of historic period

CO 3: To acquaint the students with different types of costumes.

CO 4: To assess opportunity for skill development in designing accessories.

Paper III: Garment Construction & Draping

CO 1: Students will apply concept of advance pattern making and different garment construction techniques.

CO 2: Students will be able to learn Commercial pattern making techniques which will support students to work with industry.

CO 3: To introduce concept of advanced garment construction.

CO 4: To impart knowledge of different garment components.

Paper IV: Fashion Illustration & Appreciation

CO 1: Student will discover to design theme-based project.

CO 2: Students will design and develop theme-based collection on any type of theme.

CO 3: To enable students to create designs by taking inspiration from different themes.

Paper V: Pattern and Marker Making on Computer

CO 1: This course aids in translating patterns and layouts according to body measurements.

CO 2: Students will able to analyse skills of marker plan, pattern making & drawing using computers.

CO 3: To impart the skills of marker plan, pattern making and drawing using computers.

Semester-V

Paper I: Fashion Illustration and Appreciation

CO 1: The highly effective and superior study program brings in opportunity to maximize creative skills by collage making on different theme-based collections.

CO 2: Students will illustrate and develop garments by taking inspiration from historical period, monuments, traditional fabric, embroideries and many more themes.

CO 3: Student will be able to appreciate and originate the Fashion Illustrations.

Paper II: Draping, Pattern Making and Construction

CO 1: Students will able to classify and drape stylized skirts, necklines, bodice & torso.

CO 2: Students will be able to Concept of draping and stitching will be utilized in developing garments for clients.

CO 3: Students will be able to construct garments on each theme: Night Wear, Ethnic wear

Paper III: CAD (Computer Aided Design)

CO 1: Software helps the students to discover the design world, as maximum work is done on

software in design world.

CO 2: Software will help students to determine the process of creating technical drawing with the use of computer aided designing.

CO 3: Students will be able to Design different outfits using themes like: Flora and Fauna, Traditional Fabric and embroidery

CO 4: Student will be able to imagine Minimum 2 designs and create the same on computers.

Paper IV: Internship for Design and Construction of Garments

CO 1: Students will be able to Adapt Designers to work closely with garment technologists and sample machinists. The role could also involve liaising with manufacturers (often based overseas) to make sure designs are reproduced accurately.

CO 2: Students will able to examine and perceive industrial working methods.

CO 3: Students will be able to justify, how management plays an important role in every field.

Paper V: Leather Technology

CO 1: Students will explain Packaging of product –importance and various materials used for packaging.

CO 2: Students will be able to summarize leather manufacturing process.

CO 3: To impart knowledge about Leather technology.

CO 4: To enable students to develop practical skills of leather Product Formation.

Semester-VI

Paper I: Fashion Illustration and Appreciation

CO 1: To classify framework for students to understand the basic concept of illustration.

CO 2: It helps students to interpret different types of colour medium in illustration.

CO 3: Students will be able to appreciate work of western and Indian designers

CO 4: Student will be able to illustrate the innovative dresses by the use of appropriate mediums and different presentation skills by taking inspiration of famous western and Indian designers.

Paper II: Pattern Making and Construction

CO 1: This course helps students to perceive, design and develop different types of female garments according to theme-based pattern.

CO 2: It helps students in Construction of garments on each theme: Office wear, Evening wear

CO 3: Students will be able to design and construct any innovative garment based on previous paper.

Paper III: Computer Aided Design

CO 1: Students will able to originate, and develop designs on Corel draw & Adobe

Photoshop

CO 2: It helps students in Designing and Construction of outfits on the themes

1. Season/Casual wear
2. Party wear
3. Sportswear/ Uniform (School)

CO 3: It helps students in Draping simulation of designs.

Paper IV: Survey and Project Report

CO 1: Support the student with ability to discover a style that is distinctively consistent.

CO 2: Helps student to develop ability to manage the process of emerging designs through creativity and preparing graduates to work with fashion industry.

CO 3: After completion of the project students will be able to support working on different types of field project.

CO 4: After doing survey on any Indian state, the student will be able to

1. Make a project report
2. Design any 10 garments taking it as inspiration

Paper V: Fashion industry, Marketing and Management

CO 1: After studying this course the students should be able to apply various marketing &

management aspects to their projects and understand marketing techniques to run any business effectively.

CO 2: Students will be able to inspect the Career & job roles in fashion industry.

CO 3: Students will perceive how management plays an important role in every field of fashion.

CO 4: After completion of the project students will be able define and differentiate Indian and global fashion.

Paper I: Fashion Illustration

CO 1: To classify framework for students to understand the basic concept of illustration.

CO 2: It helps students to interpret different types of colour medium in illustration.

CO 3: Students will be able to appreciate work of western and Indian designers

CO 4: Student will be able to illustrate the innovative dresses by the use of appropriate mediums and different presentation skills by taking inspiration of famous western and Indian designers.

Paper II: Product Development Workshop

CO 1: Students will able to design and develop different types of garments for kids.

CO 2: Students will learn developing the designs planned or thought & an implementation to the thinking is given by drafting of different designs.

CO 3: To enable the students to apply the knowledge of design process in making a collection

Paper III: Pattern Making and Grading

CO 1: Students will be able to determine sleeve and adult bodice block with metric system

CO 2: Various design technique and styles are explored in drafting of different types of collars, sleeves, skirts. Contoured pattern, dart manipulation & grading.

CO 3: Students learn and apply techniques of up grading and down grading

CO 4: To understand the importance of pattern development and apply the knowledge of pattern development for creating structural designs

Paper IV: Computer Aided Fashion Designing

CO 1: This course leads to success in education & employment as computer skills are integral to all areas of study. The students will gain knowledge of Adobe Illustrator and Adobe Photoshop in detail.

CO 2: Students will also learn to design fashion details, accessories, figure drawing of male, female and kids on computers.

CO 3: Knowledge of draping simulation on Adobe Photoshop is also perceived.

CO 4: To enable students to handle tools of Adobe Illustrator & Photoshop to create fashion and design Illustration

Paper V: History of Indian Costumes

CO 1: Ability to relate art of historical costumes of men and women during Indus valley civilization, British period, Mauryan, Mughals and traditional costumes of India.

CO 2: Students will appraise knowledge of– Headgears, footwear, handbags, belts, gloves, earrings, necklaces and bangles which will further helps them in designing.

CO 3: To acquaint the students with different types of costumes.

CO 4: To assess opportunity for skill development in designing accessories.

Semester-II

Paper I: Fashion Illustration

CO 1: It will help students illustrate basic block figures- Male and female.

CO 2: Students will make use of various effects, texture and basics of art and design world to

foster creativity of the students.

CO 3: To understand the what, why and how of illustration techniques

CO 4: Students will be able interpret Fashion Design concepts and colour theories.

Paper II: Product Development- Workshop₁₄₉

CO 1: Students will able to apply the knowledge of design process in making collection of female wear.

CO 2: Students will learn developing the designs planned or thought & an implementation to the thinking is given by drafting of different designs.

CO 3: To enable the students to apply the knowledge of design process in making a collection of women wear.

Paper III: Pattern Development & Draping

CO 1: Students will understand and create pattern for the collection

CO 2: It provides technical knowledge of draping in developing patterns and designing via draping.

CO 3: The students will learn to develop draped patterns of basic foundation patterns along with variation in collar, sleeve and neckline.

Paper IV: Computer Aided Fashion Designing

CO 1: To enables student to improve working on pattern making and grading software (Rich piece).

CO 2: Student will appraise and assess design projects which help to increase productivity and efficiency of work

CO 3: Student maximize the process of creating technical drawing with the use of software.

Paper V: Fashion Merchandising and Marketing

CO 1: Students will able to explain role & responsibility of Fashion Merchandiser.

CO 2: The students experiment with material availability in market, fashion forecast, upcoming trends and demands of the consumers.

CO 3: Students will perceive, how management plays an important role in every field of fashion.

CO 4: After completion of the project students will be able define and differentiate Indian and global fashion.

Paper VI: Traditional Indian Embroideries

CO 1: To translate beauty of garments with embroidery, painting and other decorative materials.

CO 2: To know and choose appropriate fabric suited to the design of the garment with special reference to colour, texture and design of fabric by visit to any textile museum, craft cluster/craft area.

CO 3: This course will help student to understand and create documentation of the selected craft.

Semester-III

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Paper I: Product Development- Workshop

CO 1: Students will able to develop different types of male garment.

CO 2: This course helps students to evaluate and incorporate drafting casual, traditional, street and formal wear for male garments.

CO 3: The student will be able to understand process of Design Development Research Finalization of Theme Sourcing Finalization of designs Measurements and specification sheets.

CO 4: The student will be able to analyse, evaluate and submit the documentation of the design process.

Paper II: Advance Draping

CO 1: Students will be able to apply the knowledge of draping in developing patterns and designs by different designs.

CO 2: The concept of contouring used in draping to make off shoulder and padded evening gowns will also be taught by which students will be able to modify handling fitting problems in designing.

CO 3: The student will be able to Drape and stitch any designed garment.

Paper III: Computer Aided Fashion Designing

CO 1: Students will be able to elaborate designing through use of Adobe Illustrator &Photoshop and hence create fashion & design illustrations.

CO 2: It allows students for greater modelling and even provides a basis for virtual networking.

CO3: Helps the student to interpret that in designing world, CAD is extremely important and widely used to design and develop products to be used by consumers.

Paper IV: Surface Ornamentation

CO 1: Students will utilize skills to beautify garments with embroidery, printing, crochet, macramé and other decorative materials

CO 2: Students will be able to incorporate the above and develop apparels.

CO 3: To know and choose appropriate fabric suited to the design of the garment with special reference to surface ornamentation.

CO 4: This course will help student to understand and create documentation of the selected craft.

Paper V: Global Costumes

CO 1: To develop knowledge of costumes related to men and women like Babylonian costumes, Persian, Egyptian, Greek, Roman period etc.

CO 2: To determine the use of – Headgears, footwear, handbags, belts, gloves, earrings, necklaces and bangles globally and hence help in planning and designing according to

the world's culture.

CO 3: To acquaint the students with different types of costumes.

CO 4: To assess opportunity for skill development in designing accessories.

Paper VI: Seminar-Indian Traditional Textiles

CO 1: The students will gain knowledge about the traditional textiles of India.

CO 2: Students will be able to apply traditional fabrics of different states of India with emphasis on texture, design and colour to any design of their choice.

Semester-IV

Paper I: Portfolio Development

CO 1: Student will learn that Portfolio development is the important part of designing to expose students to real work like situation and improve male, female and kids garments with various boards, specs, cost sheets and garment collection.

CO 2: The student will learn that the art portfolio is an expression of graduating student's creativity, design/ ability, technical expertise, illustration and presentation skills.

CO 3: It explains and evaluates the student's inclination towards the particular segment of the industry by identifying the target customers, design requirements and pricing

Paper II: Product Development- Workshop

CO 1: Students will able to construct different types of kid, male or female garments.

CO 2: Students will able to apply the knowledge of design process in making a collection

CO 3: The student will be able to understand process of Design Development Research Finalization of Theme Sourcing Finalization of designs Measurements and specification sheets.

CO 4: The student will be able to analyse, evaluate and submit the documentation of the design process.

Paper III: Fashion Merchandising and Retailing

CO 1: Students will able discuss about various retail organizational structure store.

CO 2: Students will learn the role of Customer identification, customer, planning and role of buyer.

CO 3: Students will perceive how management plays an important role in every field of fashion.

CO 4: After completion of the project students will be able define and differentiate Indian and global fashion.

Paper IV: Textile Chemistry

CO 1: Students will able to learn and identify different types of Fibres

CO 2: To interpret different fibres through Microscopic appearance, burning test and solubility test for to know the fabric type.

CO 3: The student will be able to do Fabric Identification on the basis of fabric construction. Woven knitted, Non-woven Fabric analysis on the basis of the thread count

CO 4: The student will be able to do Collection and identification of fabric Construction techniques Woven, Non- Woven Knitted and Dyeing of Fabric Cotton with natural dyes and Direct dyes Wool with acid dyes Silk with basic dyes

Paper V: Project Report/Design Project

CO 1: This course helps the students in developing the knowledge and versatility of students andhelps them in boosting their career by designing through research.

CO 2: It involves application of learned skills in designing and developing to the major project report.

CO 3: It explains and evaluate the student's inclination towards the particular segment of the industry by identifying the target customers, design requirements and pricing

CO 4: The student will be able to analyse, evaluate and submit the documentation of the design process.

Name of Programme: PG Diploma in Garment Construction &Fashion Designing Programme Specific Outcome

PSO 1: This course helps to develop students with a holistic perspective of product development process right from the design concept.

PSO 2: After completion of this one-year course students may get opportunities in area like design houses, export houses, buying houses, handloom sector, retail fashion brand etc.

PSO 3: Students may get offers from both government and private designing companies.

PSO 4: The students of this course will have an in-depth knowledge on apparel and textile

designs, production methods etc.

PSO 5: The key principles and skills obtained the course leads to many career opportunities and ensure a successful career in fashion and related industries.

Course Outcomes

Semester –I

Paper I: Pattern Making

CO 1: Students will be able to explain Different aspects of pattern making.

CO 2: Students will able to develop Commercial paper patterns of various designs.

CO 3: Student will be able to relate different aspects of pattern making and grading.

CO 4: Student will be able to develop the concept of pattern making and draping.

Paper II: Fashion Illustration

CO 1: Students will able to define and explain: Figure sketching.

CO 2: Illustrate techniques for various garment details.

CO 3: To understand the what, why and how of illustration techniques

CO 4: Students will be able interpret Fashion Design concepts and colour theories.

Paper III: Garment Designing

CO 1: The students will construct and develop process to work on patterns for various basic deigns.

CO 2: The student will be able to encompasses the development of pattern making skills, fashion details and illustration techniques in designing various outfits.

Paper IV: Garment Construction

CO 1: Students will build pattern making and stitching of skirts, kurti and kalidar kurta and pyjama for ladies' garments.

CO 2: With the help of developing Commercial pattern the students will be able to work with industry.

CO 3: Students will able to understand and translate Construction of collars – Flat and rolled, peter-pan collar

CO 4: Student will be able to make use of Sewing machines and other basic sewing techniques used for Garment formation.

Paper V: Fashion Concepts

CO 1: To understand, analyse and apply principles and elements of design with respect to textile garments.

CO 2: Students will understand relation between design development and colour importance.

CO 3: Students will be able to interpret different fashion cycles and theories of fashion

CO 4: Students will be able to interpret social and psychological aspects of clothing

Paper VI: Workshop - Surface Ornamentation

CO 1: To enable the students to construct and beautify garments by imparting practical skills in needle craft, embroidery, painting and other decorative materials

CO 2: Students will learn to demonstrate and understand how an art form expresses the culture that produced it.

CO 3: To know and choose appropriate fabric suited to the design of the garment with special reference to surface ornamentation.

CO 4: This course will help student to understand and create documentation of the selected craft.

Paper VII: CAD in Fashion

CO 1: To enables students apply methods of surface ornamentation of fabric using different techniques to produce value added products

CO 2: To formulate knowledge about Corel Draw and photo paint.

CO 3: Students will apply CAD based application in fashion designing

CO 4: Helps the student to interpret that in designing world, CAD is extremely important and widely used to design and develop products to be used by consumers.

Semester- II

Paper I: Pattern Making

CO 1: To extend knowledge about different aspects of pattern making, dart manipulation, draping & commercial pattern making techniques.

CO 2: It helps students in Construction of garments on each theme: Office wear,evening wear

CO 3: Students will be able to design and construct any innovative garment based on previous paper.

Paper II: Fashion Illustration

CO 1: To enables students to design and create: Figure sketching.

CO 2: Illustrate techniques for various garment details.

CO 3: Students will be able to analyse two dimensional and three-dimensional images.

CO 4: To enable students to gain knowledge of figure sketching and drawing.

Paper III: Garment Designing

CO 1: Students will able to develop: Fashion details and designing various outfits, illustration Techniques and fashion design concepts.

CO 2: The student will be able to understand process of Design Development Research Finalization of Theme, Sourcing, Finalization of designs Measurements and specification sheets.

CO 3: The student will be able to analyse, evaluate and submit the documentation of the

design process.

Paper IV: Garment Construction

CO 1: Students will be able to learn and apply various construction techniques in apparel designing

CO 2: Students will be able to apply above learnt techniques in garment construction.

CO 3: Students will learn developing the designs planned or thought & an implementation to the thinking is given by drafting of different designs.

CO 4: To enable the students to apply the knowledge of design process in making a collection of women wear.

Paper V: Fundamentals of Textiles

CO 1: To identify and discuss concepts related to the traditional fabrics of different states of India.

CO 2: Students will be able to assess, importance of textiles in fashion designing.

CO 3: Students will be able to define various fabric construction methods.

Paper VI: Workshop - Surface Ornamentation

CO 1: Students will to learn methods of surface ornamentation of fabric to develop value added products.

CO 2: To enable the students to develop practical skills in needle craft and printing.

Paper VII: CAD in Fashion

CO 1: Students will make use of operating knowledge of Corel draw and photo paint.

CO 2: To learn CAD based software and support its application in fashion designing.

BA Social Studies

Paper: Political Science

CO1: Students learn to describe and understand politics

CO2: Students learn to explain various theories of Justice

Paper: Public Administration

CO1: It develops critical thinking among students

CO2: Students learn to lead and manage in Publicgovernance

Paper:Economics

CO1: Students will be able to their economic skills in the social and corporate world.

CO2: Students will be able to analyze the performance of government, markets.

Paper:History

CO1: Students can learn from past and apply the problem solving skills.

CO2: Students can learn to organize and express their thoughts clearly and coherently.

Paper:Sociology

CO1: Sociology can help students understand basic social process, social institutions, and patterns of social behavior.

CO2: Sociology can help students to understand morality concepts and measures of morality.

Paper:Geography

CO1: Understanding the relationship between geography and culture.

CO2: Understanding environmental issues.

Paper:Drug Abuse

CO1: Students will be able to differentiate between a social users, substance abuser and addict.

CO2: Students will be able to explain the differences between physical and psychological dependence.

Paper:Science and Technology

CO1: Students should be able to engage in scientific methods of inquiry.

Co2: Students will be able to apply knowledge and skills through critical thinking and interpret scientific data.

Paper:Fundamentals of computer

CO1:Learning the functional units and types of computers.

CO2: Understanding input and output devices

Paper:Ethics and integrity

CO1:Identifying and analyzing inappropriate behavior.

CO2: Identifying ethical issues

Paper:Quantitative Aptitude and Reasoning

CO1:Solve problems using shortcut technique

CO2:Use logical thinking and analytical abilities to solve problems.

Paper:Environmental studies

CO1:Students can learn about environmental issues and their surroundings.

CO2:Students can learn about responsible government policy and practice.

Paper:Indian Art and Culture

CO1:Students may learn about the contribution of Indian ancestors.

CO2:Student will learn about ancient art.

Paper:Socio-Economic issues in Punjab

CO1:Understanding research to resolve social-economic Problems.

CO2:Creating awareness to become a rational and enlightened citizen

Paper:Current Issues and Affairs

CO1: Students can learn about current issues

CO2: Student gain knowledge of communication

B.Vocin Financial Market & Services

Semester-I

Paper III Understanding Balance sheet & Profit and Loss Account

CO1:   Thepaperenablesstudentstounderstandtheconceptofbookkeepingandaccounting.

CO2:   Student willlearnthedifferentconceptsandconventionsofaccounting.

CO3:   Thepaperwillexplainthemainelementsoffinancialaccountinginformation–

assets,liabilities,revenue, expenses,financialstatementsandtheirpurposes.

Paper IV Indian Financial System

CO1:To provide students with basic concepts and theories of Finance, its markets and various services

provided in the Finance sector.

CO2:To provide students with the knowledge of various instruments traded in the financial markets.

CO3:To provide information to students about the current financial system in India

Paper VComputer Fundamentals

CO1: Converse in basic computer terminology

CO2: Formulate opinions about the impact of computers on society

CO3: Possess the knowledge of basic hardware peripherals

Semester-II

Paper IV Basics of Insurance

CO1: Understand the various types of fixed income / debt instruments

CO2: Know the concept of stock market investment

Paper VCommercial Banking

CO1:To review and understand Current Banking Scenario India.

CO2: The course aims to acquaint and familiarize students with the Performance of Scheduled Commercial

CO3: The course aims to expose the students to the Recent trends in Commercial Banking in India.

Semester-III

Paper II Corporate Finance

CO1:Apply and critically evaluate finance and investment theory with particular reference to the operation of financial markets.

CO2: Apply and critically evaluate corporate finance techniques.

CO3: Apply and critically evaluate theories of financial statements and related analysis.

Paper III Equity Markets

CO1:Understand overall share market.

CO2: Identify the trends, support, and resistance in the Stock Market.

CO3: Understand how to build portfolio and investment decision in appropriate manner.

Paper IV Fixed Income Markets

CO1: Discuss risks from fixed income securities.

CO2: Explain the features of money market and bond instruments.

CO3: Calculate the cash flow from a bond.

Semester IV

Paper IDerivative Management

CO1: To predict the price movement in the stock market and to provide commitments to prices for future dates to give protection against adverse movements in future prices.

CO2: To understand the basics of the various instruments operating in the stock market along with their trading mechanism and regulations.

CO3: To develop various pricing models of stock prices, trading, hedging of options and management of derivative exposure.

Paper II Commodity Markets

CO1: The principal underlying commodity markets and how they operate

CO2: Principal determinants of price in commodity markets

CO3: Main players, their trading characteristics and objectives

CO4: Commodity derivatives exchanges

Paper IVBusiness Ethics

CO1: Explain the concept of business ethics

CO2: Explain how ethics relates to the business and the individual

CO3: Define "corporate code of ethics"

Paper VI Global Financial Markets

CO1: provide a solid understanding of how these markets and products function, and how they influence the strategies of market participants in such sectors as manufacturing, natural resources and energy, commercial and investment banking, and money management (pension funds, hedge funds, mutual funds, and foundations

Semester V

Paper I Money Market Instruments and Operations

CO1: To understand the meaning, importance and features of the money market.

CO2: To study the various instruments of the money market

Paper IITreasury Management

CO1: To identify the different types of treasury management instruments available along with their purpose

CO2: To critically evaluate the corporate policy decisions taken by real companies in real situations.

Paper III Mutual Funds

CO1: Know the basics of mutual funds, their role and structure, different kinds of mutual fund schemes and their features

CO2:Understand the channels for mutual funds distribution

CO3: Understand the legalities, accounting, valuation and taxation aspects underlying mutual funds and their distribution.

Paper III Market Analysis

CO1: Critically evaluate the key analytical frameworks and tools used in marketing

CO2: Apply key marketing theories, frameworks and tools to solve Marketing problems

CO3: Utilise information of a firm's external and internal marketing environment to identify and prioritise appropriate marketing strategies

Paper V Market Risk Management

CO1: Understand the principal types of market risk, their measurement and mitigation methods

CO2: Gain familiarity with market risk management concepts and terminology

CO3: Recognize the occurrence of market risk in real-life situations

Semester VI

Paper III Strategic Management

CO1: To get familiarized with the contemporary business environment

CO2: To understand the basic concepts of strategic management, generic strategic alternatives and its process

CO3: To grasp the importance of strategic analysis and apply various methods used for the analysis

Paper V Financial Planning &Wealth Management

CO1: Comprehend the concepts of saving, investment, insurance, loans and retirement planning.

CO2: Understand the Investor Psychology around savings and investment and use the same in preparation of financial plan

CO3: Understand and practically implement the concept of 'goal-based planning'

B. VocIn Fashion Technology And Apparel Designing

CO1: To promote an understanding of fashion and textile design in relation to the needs of fashion, contractual furnishings, home textiles, and the business to business textile products.

CO2: To provide hands-on experience using a set of complex technologies found in industry today to build prototypical solutions to solve current needs.

CO3: To provide experience in responding to market opportunities with creative and innovative products that integrate a set of academic disciplines such as textile materials, design fundamentals, business fundamentals, sourcing, data mining of market information, and new developments in material science and engineering.

CO4: To create an educational environment that approximates the actual conditions in industry by building studios and workshops containing state-of-the-art systems, resources, technologies, and a community of creativity and innovation.

CO5: To develop strong multi-functional teamwork and communication skills using visual and verbal presentation assignments and interfaces with practitioners in the design community and the industry.

CO6: Prepare graduates for career in, but not limited to the - fashion design,design managers, apparel production. Fashion stylist, freelance designers and visual merchandisers.

CO7: Familiarize students with styling & fashion illustration, apparel design by draping and creative surface ornamentation project.

CO8: Provide a good grounding in the best practice of fashion detailing. Accessories design & innovative craft.

CO9: Prepare students to undertake further study at doctoral level.

CO10: Teach students to explore various trend analysis & product conceptualization of fashion and technology in the real world.

B.Voc E-Commerce & Digital Marketing

Semester-I

Paper: Fundamentals of Management

CO1: Familiarize with the terms like management, planning, organising and controlling or directing etc.

CO2: Gain knowledge of staffing and organisation.

CO3: Learn the concept of controlling and coordination of management.

CO4: Calculations of Discounts, Offers,Margins, Financial Schemes &Basic Accounting.

Paper : Fundamentals of E-Commerce

CO1: Understand the concept of E-Commerce and illustrate the opportunities and challenges offered by E-Commerce.

CO2: Handle electronic payment technology and necessity for internet based payments.

CO3: Understand the categories of e-commerce and recognise the different applications of E-Commerce.

CO4: Understand toidentify various security issues of E-Commerce.

CO5: Understand the concept of web based business.

CO6: Understand the M-Commerce applications.

Paper : Information Processing Lab

CO1: Familiarise with the terms like operating system, input output and storage devices networking multimedia internet etc.

CO2: Understand the concept of MS office and windows based operating system.

CO3: Learn how to create presentation in MS PowerPoint.

CO4: Learn how to use internet for searching information on web sending emails and many other tasks.

Paper :Web Designing using HTML and DHTML

CO1: Learn various HTML elements like table list forms frames etc.

CO2: Learn how to use casting style sheets.

CO3: Learn how to create a website with the help of dream beaver.

CO4: Learn how to use Dreamweaver templates add links and new web pages online forms.

Semester-II

Paper: Marketing Management

CO1: Gain knowledge of how to enhance the marketing.

CO2: Learn how to improve the marketing.

CO3: Understand the scope of marketing areas.

CO4: Understand the concept of advertisement and sales promotions

Paper :Internet Applications

CO1: Learn the concept of the internet and how it works in sharing information.

CO2: Learn about ISP, DNS, and IP addressing.

CO3: Learn various internet protocols like FTP ,HTTP, TCP/IP etc.

CO4: Learn how to open and view web page using web browsing.

Paper: Database Management System and Structured Query Language

CO1: Learn basic knowledge of database, Database management system and RDBMS and data models.

CO2: Learn the concept of normalization of databases.

CO3: Gain the practical knowledge of SQL and PL SQL.

CO4: Learn uses of DBMS design and administration.

Paper: Web Designing using XML and CSS

CO1: Gain the knowledge of how to use CSS tags.

CO2: Understand the concept of XML and CSS.

CO3: Gain knowledge of XML coding.

Paper: Practical based on Database Management System and Structured Query Language

CO1: Gain practical knowledge of PL/SGL programs and Microsoft SQL

Paper :PHP Programming and MYSQL

CO1: Learn the concepts of PHP and its advantages over other languages.

CO2: Uses HTML form elements that work with any server side language.

CO3: Validate user input.

CO4: Create a web page using the concept of PHP.

Paper: Lab based on Core PHP and MYSQL

CO1: Learn the concepts of PHP and its advantages over other languages.

CO2: Uses HTML form elements that work with any server side language.

CO3: Validate user input.

CO4: Create a web page using the concept of PHP.

Semester-III

Paper: Fundamentals of Entrepreneurship

CO1: Gain knowledge about entrepreneurship concepts.

CO2: Understand the knowledge of women entrepreneurship.

CO3: Understand the role of government in entrepreneurship.

Paper :Fundamentals of Finance and Accountancy

CO1: Gain the knowledge of management and planning of the business.

CO2: Learn how to organise and control business.

CO3: Gain knowledge about profit and loss sheet, balance sheet, trading sheet.

CO4: Understand the role of finance manager.

Paper :Content Management System Using Wordpress

CO1:Learn the concept of word press and content management system using internet.

CO2: Learn how to add hyperlinks and tags.

CO3: Gain knowledge of using visual editor,readingand writing skills etc.

Paper :Website Development (Practical)

CO1: Gain practical knowledge of how to create a dynamic website.

Paper :Web Designing using Photoshop

CO1: Understand the concept of HTML, CSS.

CO2: Learn the use of various Photoshop tools.

Semester-IV

Paper - Retailing

CO1: Have knowledge about retailing practices followed in India.

CO2: Understand behaviour of retail shopper.

CO3: Understand the basics of retail merchandising and merchandising planning process.

CO4: Familiar with merchandise Procurement and pricing issues.

Paper: Advertising and Sales Management

CO1: Learn about definition, nature and evolution of advertising its functions and role and types of advertising social economic and legal aspects of advertising.

CO2: Understand the concept of advertising media and different elements of copyrighting.

CO3: Understand the concept of sales management planning and recruitment of sales force sales training etc.

Paper: Linux Server Management

CO1: Learn the fundamentals of Linux web server administrations.

CO2: Learn the concepts of Linux file system to have knowledge about Linux mail and cashier server administration.

CO3: Have in-depth knowledge about various components and management aspects of concurrency management.

CO4: Have knowledge about how to implement firewall and security administrations.

Semester-V

Paper :Consumer Behaviour

CO1: Have knowledge about the consumer decision making process.

CO2: Have understanding of the influence of various environmental factors on consumer behaviour.

CO3: Have practical approach at the various stages of purchasing.

Paper :Concepts of Social Media Marketing

CO1: Learn about the fundamentals of digital marketing.

CO2: Learn about webmaster tools to get a site working on webmaster.

CO3: Learn about other working of Google analytics.

CO4: Learn about social media optimization.

CO5:Have knowledge how Google marketing and email marketing works.

Paper: E-Commerce and Practices

CO1: Have knowledge about Indian contract act.

CO2: Learn about Cyber laws, Consumer Protection Act and Sales of Goods Act practicing in the country.

Paper: Programming in Java

CO1: Understand the concept of Java application programs using OOP principles and proper program structures.

CO2: Create packages and interfaces.

CO3: Learn how to implement error handling techniques using exception handling.

CO4: Familiarize with the concept of multi-threating input output streams in JAVA and database connectivity.

Semester-VI

Paper: International Marketing

CO1: Learn about the principles and benefits of international marketing.

CO2: Acquainted with the management orientations and market entry strategies such as Joint ventures, Strategic alliances.

CO3: To know the importance of direct investment manufacturing and franchising.

CO4: Learn about the international logistics planning and direct and indirect channels.

CO5: Get a knowledge about the various mode of transformation, major documents used in important export marketing.

Paper :Customer Relationship Management

CO1:Understand about the customer relation management.

CO2: Able to identify the major factors influencing consumer behaviour and the stages of buying decision process.

CO3: Learn about to create customer satisfaction index.

CO4: Learn about the different traits of building customer value.

CO5: Learn about the uses of Internet in establishing customer relationship and also about technology issues confronting in CRM implementations.

Paper :Android Application Development

CO1: understand the basic concepts environment setup and framework of Android development.

CO2: Understand why use Android for mobile.

CO3: Understand activity lifecycle and manifest creating Android application.

CO4: Able to build and enterprise level Android application, testing and debugging Android application

and installing apk.

Paper: Search Engine Optimisation

CO1: understand how to use SEO to connect with your target audience.

CO2: Able to recognise the well optimised key components of a website.

CO3: Able to apply insights from keyword research to comprehend user intent.

CO4: Find out how to increase the volume and quality of your website visitors.

CO5: Learn how to make your pages and content more conversion friendly.

CO6: Able to recognise current and upcoming trends in the SEO sector.

B.Voc Software Development

SEMESTER–I
Paper:Fundamentalsof InformationTechnology

CO1: Makingthestudentsunderstand and earnthebasicsofcomputerhowtooperateit.

CO2: Tomakefamiliarwiththepartandfunctionofcomputer, itstypes, howtousecomputer in ourday to day life.

CO3:ToknowItscharacteristics,itsusage,Limitationsandbenefits etc.

Paper: WebTechnology

CO1: Understandtheprinciplesof webenvironment.

CO2: Becomefamiliarwithprinciplesthatrelatetowebdesignandlearnhowtoimplement these theories into practice.

CO3: Developskillsin designingstaticanddynamicwebpages.

CO4: Learnthelanguageof theweb:HTMLand CSS.

CO5: Publishyour websitetotheweb.

Paper: ProgrammingusingCLanguage

CO1: KnowledgeandUnderstanding:Onsuccessfulcompletionofthissubjectthestudents have the programming ability in C Language.

CO2: IntellectualCognitive/AnalyticalSkills:EnhancingLogicalThinkingandReasoning Skills through Collaborative Learning in C Programming.

CO3:Practical Skills: Students would be capable of developing various applications to solve deluge of real world problems. They can also learn to make system software as well as application software.

SEMESTER–II
Paper: Internet Application

CO1: knowhowtodefine internet,www, various protocols

CO2: understandtheworkingofinternet

CO3: Studentswillunderstandandbeabletodescribethedifferencesbetweeninternetand intranet.

CO4: Createprojects and earnmoneybysellingthem

Paper: Data Structure

CO1: Define basic static and dynamic data structures and relevant standard algorithms for them: stack, queue, dynamically linked lists, trees, graphs, heap, priority queue, hash tables, sorting algorithms.

CO2: Determine and demonstrate bugs in program, recognize needed basic operations with data structures

CO3: Abilitytodrivedifferentsolution alternatives forthecomputerscienceproblems.

CO4: Searchforinformationandadoptlife-longself-learning.

Paper: ObjectOrientedProgramming

CO1: Ableto know how todo programmingin C++environment.

CO2: Abletounderstandand implementtheconceptsof objectoriented approachusingC++.

CO3: identifydifferentclassattributes,memberfunctions,baseclassandderivedclassand their relationships among them

CO4: learnhow to reusethecodeusingpolymorphism

SEMESTER–III

Paper: Database System

CO1: Thekeygoalistopreparestudentsforaprofessionalcareerinthefieldofdata administration and database design.

CO2: TogetacquaintstudentswithgoodknowledgeofDBMS.Duringthecourse,students will learn about database design and database handling activities.

CO3: Knowledge&Understanding:Databasesandtheirdesign& development

CO4: IntellectualCognitive/analyticalskills:Normalizationof Databases.

Paper: JavaProgramming

CO1: ImplementObjectOrientedprogrammingconceptusingbasicsyntaxesofcontrol Structures, strings and function for developing skills of logic building activity.

CO2: Identifyclasses,objects,membersofaclassandtherelationshipsamongthemneeded for a finding the solution to specific problem

CO3: Evaluatehowtoachievereusabilityusinginheritance,interfacesandpackagesanddescribes faster application development can be achieved.

CO4: Understand the importance of Classes & objects and will be able to implement it along with constructors, Arrays and Vectors.

Paper: SoftwareEngineeringMethodology

CO1: Understanding the issues affecting the organisation , planning, control of software-based systems development.

CO2: Completetheanalysisand designof softwareintensive systems.

CO3: Readandunderstandthe professionaland technicalliteratureonsoftware engineering.

SEMESTER–IV

Paper: Open Source Software

CO1: Understandtheopen sourcesoftware anditstypes

CO2:Usetheopensourcedevelopmentmethodologiesfordesigningandimplementingopen source products

CO3: Differentiatetheopen sourcesoftwarelicenses and theirusage

CO4: Utilizethevariousopensourceproductsavailable inthemarket.

Paper: InformationSecurity

CO1:Developanunderstandingofinformationassuranceaspracticedincomputeroperating Systems, distributed systems, networks and representative applications.

CO2: Gainfamiliaritywithprevalentnetworkanddistributedsystemattacks,defensesagainst them.

CO3: DevelopabasicunderstandingofriskManagementandriskcontrolStrategies.

CO4: Gainknowledgeofcybercrimes.

Paper: OperatingSystem

CO1:AppreciatetheroleofoperatingsystemasSystemsoftware.

CO2:Comparethevariousalgorithmsandcommentaboutperformanceofvariousalgorithms used for management of memory, CPU scheduling, File handling and I/O operations.

CO3: ApplyvariousconceptrelatedwithDeadlocktosolveproblemsrelatedwithResources allocation, after checking system in Safe state or not.

Semester – V

Paper: SoftwareProjectManagementandBusiness Solution

Afterstudyingthis course,youshould beable to:

CO1: Developplanswithrelevantpeopletoachievethe project'sgoals

CO2: Breakworkdownintotasksanddeterminehandoverprocedures

CO3: Identifylinksanddependencies,andschedule toachieve deliverables

Paper: SoftwareRe-engineering

CO1:UnderstandingvariousBPR methodologiesandtheirapplications.

CO2:.UnderstandingthecriticalsuccessfactorsforimplementingBPR

CO3:AppreciatevariousalternativetechniquesofBPR–TQM,WorkStudy,Benchmarking and their applications.

CO4: BasicunderstandingofISOstandard9001:2015, IACBEandtheirapplicationsin education and industry.

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Paper: SoftwareTestingandQuality Assurance

CO1: Investigatethereasonforbugsandanalyzetheprinciplesinsoftwaretestingtoprevent and remove bugs.

CO2: Implementvarioustestprocessesforqualityimprovement.

CO3:Tohandletypesoferrorsandfault models

CO4: Identifyandapplyappropriateautomatedtestingtool.

Semester – VI

ProjectDissertation(IndustrialTrainingandProjectinSoftware/ITindustry)

Diploma in Library Sciences

Paper:Library Organization & Management

CO1: Understand the concept and history of management

CO2: Elaborate principles and functions of management

CO3: Carry out various operations of Library and Information Centres.

CO4: Manage, preserve and provide access to various print and non-print the library statistics and prepare annual report

Paper:Reference Service & Document Bibliography

CO1: To make the students aware about the reference sources Understand the types of reference

CO2: services in libraries and organisation of Management and reference department

Paper: Organization of Library Materials

CO1: Understand the definition, purpose and types of libraries with their distinct functions and services.

Will be CO2: Aware of the emerging trends• in library organisation and services.

Paper: Library Classification (Practice)

CO1: Recognize the complex nature of universe of knowledge in relation to library classification systems. x CO2: Physically describe a document according to different codes of classification.

CO3: Classify different types of documents by applying standard codes of classification systems.

CO4: To introduce current techniques of library classification

Paper: Library Cataloguing (Practice)

CO1: Should be able to acquaint with the concept of cataloguing and the functions of library catalogues.

 CO2: Should be able to understand the importance of cataloguing standards and the reasons for their development.

CO3: Should be able to understand the structure of the bibliographic record.

Diploma in Stitching and Tailoring

CO1: To teach students basic and advanced tailoring techniques.

CO2: To provide in-depth knowledge of dress measurements and drafting patterns.

CO3: To enable students to create a variety of clothing items for men, women, and children.

CO4: To instill the importance of precision and attention to detail in tailoring.

CO5: To prepare students for self-employment in the tailoring and fashion sector.

DiplomainCosmetology

Semester-1

Paper:I

CO1:   Getthebasicknowledgeofaimsandimportanceofcosmetology.

CO2:   Provides the basic knowledge of visual poise like care of your self like teeth, ears, feet, ears,feet, removing bodyhair, nails, handcare and care of clothing.

Paper:II

CO1:   Introduction to yoga, Elements of an on-going yoga practice, Concepts and basics of warm upand cool down, Safety principles in ayoga practice.

CO2:   PracticesyogaasanaforexampleShav,Gomukh, Vajar,Chakraandmanymore.

Semester-II

Paper:I

CO1: Understand the structure, disorders and diseases of nail.

CO2:   Get theknowledge about the methods of pedicure and manicure, nails paandnailart.

Paper-II

CO1: Students will be able to integrate knowledge about role of nutrition such as protein, carbohydrates, fats, minerals vitamin etc. and basic five food groups.

CO2: Students will be able to justify what effect of color would have on the structure and howdifferent color and looks work on the hair like global color

CO 3: Understand the Basic techniques of massage and treatments of different hair problems

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