

ARYANS GROUP OF COLLEGES

**WORK PLAN
2016-2017
BCA III**

“Aryans Group strive for research, development & innovation in all relevant fields, thereby providing the students te requisite platform to showcase their talents & prepare them with an integrated & technology oriented education for a better career and to be worthy citizens of a global society”

ARYANS GROUP OF COLLEGES, NEPRA/THUHA

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PARAMETERS AND MODALITIES OF ASSESSMENT

- This syllabus is subject to any modification if required by the university.
- In case a holiday is declared on a day scheduled for a test, it will be rescheduled.
- First Mid Semester Examination scheduled to be held in September will be based on syllabus covered before first Mid Semester Examination.
- Second Mid-Semester Examination scheduled to be held in November, will be based on syllabus covered after first Mid Semester Examination.
- The Question Papers of all the subjects will be based on PTU Pattern.
- Student has to submit his/her assignments as per the prescribed dates given by the Subject Teacher.
- 40 Marks are assigned to a Student's performance in MSTs, Assignments, Overall Attendance, Class Tests, Class Behavior & Class Presentation.

▪ MST Marks	12 Marks
▪ Class Assignments	8 Marks
▪ Class Presentation	8 Marks
▪ Attendance	4 Marks
▪ Class Test	4 Marks
▪ Class Behavior	4 Marks
- Students must clear their dues in Accounts Office before taking their Admit Cards.
- Results of those students who are in arrears of fees shall be withheld.
- No request for any re- test, re-examination, re-consideration of awards, shall be entertained.

RULES & REGULATIONS

Code of Conduct

- All the students must ensure that the campus of the Institute and its facilities are maintained in a neat and clean way.
- All the students must strictly abide by the instructions, issued from time to time and conveyed through the notice Board of the Institute.
- Students must be seated in the classroom five minutes before the schedule time. No student will be allowed to leave the class, once the teacher is in the classroom.
- The academic regulations of the university require a student to attend 75% of lectures to be eligible to take the examination. However, it is desirable that all students attend all the classes regularly. Students attending classes over and above 75% will be suitably rewarded.
- All students must see the notice board and the class bulletin boards regularly to keep themselves updated about their academic schedules and requirements.
- Students are not allowed to loiter unnecessarily in the Institute/Computer Lab/Library and Hostel Campus during class hours.
- All students must maintain strict behavioral decency and discipline at all times. Any such act, which is unbecoming of a student, may lead to his withdrawal from the programme.
- Students should maintain discipline in the Computer lab/ Library/ Class room sessions. They should also take care of the equipments. Mishandling/ damage of the equipment may lead to fine.
- All students must follow the dress code on the fixed days of the week. For other working days they should come formally dressed to the college. Wearing fashionable casual dress is not allowed during the academic session.
- The Official dress code of ACE should be observed during placement interviews/Guest lectures/Institutional events/ Industrial visits.
- Students should carry their identity cards to the Institute everyday and to be produced on demand.
- Cigarettes, alcohol and narcotic drugs are strictly prohibited in and around the ACE premises.
- The use of cellular phones is strictly prohibited. The carrying of mobile phone will lead to the confiscation of the same for three years.
- Any dues against the student due to loss/damage of ACE property shall be recovered/ adjusted from security deposit.
- Students are not allowed to bring any unauthorized person into the Institute or Hostel Campus without prior permission and approval from the Director.

- No firearms, weapons or potentially dangerous instruments shall be stored in the campus in general or carried in person.
- Smoking and consumption of any alcoholic beverage or intoxicant is strictly prohibited within the campus of the Institute.
- Suspension / Expulsion orders can be implemented with regards to any student at any point of time on the following grounds:
 - Willful violation of Institute's rules & regulations.
 - Misuse of Computer facilities / Cyber crime: Any students found downloading obscene material shall be liable to strict punishment.
 - Non-attendance of classes / tutorials as per institute norms.
 - Non-payment of institute dues.
 - Abusive behavior towards peers, juniors or faculty / staff in the college, sending objectionable emails to faculty and staff.
 - Any of the conduct/ rules of the Institute can / will be changed at appropriate time by Academic Council.

Transport Rules

- The transport fee should be paid in the beginning of each semester/year.
- The student should obtain a bus pass.
- The Students travelling in the college bus should not create any disturbance to other fellow students and staff and should maintain proper discipline.
- The student will not be permitted to board or drop at points other than that is specified in their bus pass.
- All types of charges and fee relating to the transport facility are subject to revision by the college authorities for time to time.
- The bus facility is available as per the college rule.
- All the Students travelling in the college bus should carry the bus pass and produce the same at any time if demanded by the authority.
- The student must report at the stoppage before at least 5 minutes as per the scheduled time .In case he/she is late, college will not be responsible for his/her absence in the college.
- While travelling in the college bus, movement on foot-board is strictly prohibited.
- All the students/parents are expected to be aware of the transport rules of the college and ignorance of the same will not to be excuse for any dispute /claim.

- The student has to make his/her own arrangement for reporting to any interview or any kind of examination which are held outside the campus. However he/she may avail the facility, if provide by the college.
- The bus facility shall be provided in the morning and in the evening not in between during the working hours.

Hostel Rules

- A hostelite will have to stay in the room allotted to him or her with two or more roommates.
- Inmates of each room are jointly held responsible for the furniture and other things. Any damage to the hostel property is recoverable from them.
- Guests are strictly prohibited from entering hostel premises without prior admission of the warden.
- Once a student has paid and has been allotted hostel accommodation, under no circumstances the money will be refunded.
- Students may be expelled from the hostel for violation of rules and regulations, such as theft, ragging, abnormal behavior, use of drugs, alcohol, and indiscipline. A student expelled on disciplinary grounds shall forfeit his/her fees and deposit.
- Management reserves the right to reject any applicant's admission to the hostel.

Library Rules

- Library membership is compulsory for all the students. Library Timeing from 9.00am To 4.30pm. Days Monday to Sunday.
- Library membership will be valid for one academic year. Students will have to get their membership renewed at the beginning of each new academic year.
- Smart Card shall be issued to each student for borrowing books from the library. Student can borrow a maximum of two text books on that smart Card.
- Reader tickets are non-transferable. The student himself/herself will be responsible for any misuse of his/her ticket. Exchanging tickets among students is strictly prohibited.
- Text Book shall be issued to the students for a maximum period of 7 days.
- Request for reissuing the books will be entertained after one day.
- Students would be provided digital & online library facility.
- Books marked "NOT TO BE ISSUED", journals /references, magazines, newspapers, project reports, audio/video cassettes shall not be issued to the students. However, they can make use of them in library premises.

- Students would be provided photocopier facility in the library itself so that one can photocopy the material required from journals and magazines with charges.
- Borrowers shall be responsible for the safe return of the books to the library. While borrowing a book, student must ensure that book is in good condition. The student will have to replace the book or will pay double the price of the book, if any damage or loss of the book is noticed at the time of returning the book in the library.
- Bags, folders, personal books, magazines, big purses etc. are not allowed inside the library and are to be kept at property counter.
- Mobile phones are not allowed in the library.
- Visitors will not be entertained in the library.
- Silence must be maintained in the library.
- No book shall be taken away from the reading tables without permission of the librarian.
- Newspapers must not be removed from the newspaper stand.
- Scribbling/ underlining on the books is strictly prohibited .Two books at a time will be issued for a maximum period of one week.
- A fine of rupees 10 per day shall be charged if books are not returned within the specified time.
- When a Student is free from a class he should utilize Library or Computer lab facility rather than sitting idle.
- Ignorance of rules will not be taken as an excuse for breaking them.

DRESS CODE

FOR SUMMER	FOR WINTER
<ul style="list-style-type: none">• White Shirt• Grey Trouser• College Tie & Belt• Formal Black Shoes with Laces	<ul style="list-style-type: none">• Grey Blazer/black Sweater• White Shirt• Grey Trouser• College Tie & Belt• Formal Black Shoes with Laces

ENVIRONMENTAL AWARENESS

1	1-7 July	Friday-Thursday	Vanmahotsava Week
2	11 July	Monday	World Population Day
3	16 September	Friday	International Ozone Day
4	11 October	Tuesday	International Girl Child Day
5	7 November	Monday	Infant Protection day; World Cancer Awareness Day
6	1 December	Thursday	World AIDS Day
7	10 December	Saturday	Human Rights day
8	2 December	Friday	Pollution Prevention Day

LIST OF HOLIDAYS

1.	Independence Day	Monday	15 th August
2.	Janmashtami	Thursday	25 th August
3.	Parkash Utsav Sri Guru Granth Sahib Ji	Friday	2 nd September
4.	Id-ul-Zuha (Bakrid)	Monday	12 th September
5.	Birthday of S. Bhagat Singh Ji	Wednesday	28 th September
6.	Birthday of Mahatma Gandhi Ji	Sunday	2 nd October
7.	Dussehra	Tuesday	11 th October
8.	Diwali	Sunday	30 th October
9.	Vishwakarma Day	Monday	31 th October
10.	Parkash Gurpleab of Sri Guru Nanak Dev Ji	Monday	14 th November
11.	Christmas day	Sunday	25 th December

ARYANS GROUP OF COLLEGES, NEPRA/THUHA

EVENT CHART

S.No.	DATE	DAY	EVENT
1	1 st Sept	Thursday	Declamation (Management Students)
2	5 th Sept	Monday	Declamation (Engineering Students)
3	10 th Sept	Saturday	RAJNI Cultural Extravaganza
4	5 th Oct	Wednesday	AD- MAD Show
5	14 th Oct	Friday	World Standards Day- Extempore (Management & Engineering)
6	22 nd Oct	Saturday	Talent Hunt
7	23 rd Jan	Saturday	Girl Child Declamation
8	25 th Jan	Wednesday	Debate (Engineering)
9	26 th Jan	Thursday	Republic day
10	28 th Jan	Saturday	Blood Donate camp
11	18 th Feb	Saturday	Athletic Meet
12	7 th March	Tuesday	Debate- Women's Day
13	11 th March	Saturday	Ad – Mad Show
14	1 st to 8 th April	Saturday - Saturday	Roshaan(Annual function)

MARKING SCHEME FOR MST & FINAL EXAMINATION
Examination Specifications

MST Pattern

Max. Marks: 40

Time Allowed: 2 Hours

Section A: All Questions will be compulsory 10 Marks

Section B: Attempt only three out of four 30 Marks

Final Examination

Max. Marks: 60

Time Allowed: 3 Hours

Section A: All Questions will be compulsory 20 Marks

Section B: Attempt only five out of six 20 Marks

Section B: Attempt only two out of three 20 Marks

SEMESTER – V

(AUGUST-DECEMBER)

ACADEMIC CALENDER

Sr.No	Date	Day	Event
1	8 th Aug	Monday	Beginning of Classes
2	8 th -15 th Aug	Monday	Orientation Week
3	22 nd Aug	Monday	Talent Hunt
4	26 th Aug	Friday	Allotment of 1 st Assignment to Student
5	31 st Aug	Wednesday	1 Class test, 2 Case Studies (MBA), 1 Case Study (B.Tech), 1 Case Study (BCA) & 1 Case Study (BBA) ; Presentation of 20% students in each subject
6	31 st Aug	Wednesday	Compilation of Attendance & completion of 25% of syllabus.
7	1 st Sept	Thursday	Declamation (Management Campus)
8	5 th Sept	Monday	Declamation (Engineering Campus)
9	6 th Sept	Tuesday	Showing the 1 st Assignment to Students
10	10 th Sept.	Saturday	“RAJNI-Cultural Extravaganza”
11	15 th Sept	Thursday	Celebration of Engineer’s Day
12	16 th Sept.	Friday	Quiz Competition
13	19 th -23 rd Sept	Monday- Thursday	Mid Semester Test- I
14	26 th Sept	Monday	Discussion of answer sheets with students & Compilation of Marks

15	1 st -30 th Sept	Thursday- Friday	1 Class test, 2 Case Studies (MBA), 1 Case Study (B.Tech), 1 Case Study (BCA) & 1 Case Study (BBA) ; Presentation of 40% students in each subject
16	30 th Sept	Friday	Compilation of Attendance & completion of 60% of syllabus
17	3 rd Oct	Monday	Debate competition
18	5 th Oct.	Wednesday	AD- MAD Show
19	14 th Oct	Friday	Celebration of World Standards Day
20	15 th Oct	Saturday	Allotment of 2 nd Assignment
21	21 st Oct	Friday	Submission of 2 nd Assignment
22	26 th Oct	Wednesday	Showing the Assignment to students
23	1 st -31 th Oct	Thursday- Monday	1 Class test, 2 Case Studies (MBA), 1 Case Study (B.Tech), 1 Case Study (BCA) & 1 Case Study (BBA) ; Presentation of 40% students in each subject
24	30 th Oct	Monday	Compilation of attendance in each subject & Completion of 100% Syllabus
25	31 st -04 th Nov	Monday-Friday	Mid Semester Test-II
26	7 th -10 th Nov.	Monday- Thursday	Compilation of Marks & Attendance
27	2 nd week of Nov	Tentatively	Final Practical's
28	21 st Nov	Tentatively	End Semester Examination.

BCA COURSE STRUCTURE AND TEACHING
SCHEME

	SEMESTER-V	MARKS INT	MARKS EXT	TOTAL MARK S
BSBC501	DATA WAREHOUSING & MINING	40	60	100
BSBC 502	PROGRAMMING IN JAVA	40	60	100
BSBC 503	MANAGEMENT INFORMATION SYSTEM	40	60	100
BSBC 504	WORKSHOP ON ADVANCED WEB DEVELOPMENT	60	40	100
BSBC 505	SOFTWARE LAB-VI	60	40	100
BSBC 506	PROJECT WORK-I	120	80	200

DATA WAREHOUSING & MINING BSBC 501**MST 1 SYLLABUS****Section A**

Introduction to Data Warehousing, The need for data warehousing, Operational & Informational Data Stores, Data Warehouse Characteristics, Data Warehouse role & Structure, The cost of warehousing data. Introduction to OLAP & OLTP, Difference between OLAP & OLTP. OLAP Operations

Section B

Building a Data Warehouse, Design/Technical/Implementation Considerations, Data Preprocessing Overview. Data Summarization, Data Cleaning, Data Transformation, Concept Hierarchy, Structure. Patterns & Models, Artificial Intelligence (Overview). Multidimensional Data Model, Schemas for Multidimensional Data (Star Schema, Snowflake Schema, Fact Constellation), Data Warehouse Architecture, Data Warehouse Design, OLAP Three-tier Architecture, Indexing & Querying in OLAP, OLAM, Efficient Methods of Cube Computation, Discovery Driven Exploration of Data Cubes, Attributed-Oriented Induction.

MST II SYLLABUS**Section c**

Association Rule Mining, Market Basket Analysis, Apriori Algorithm, Mining Multilevel Association Rules, From Association Mining to Correlation Analysis, Constraint Based Association Mining, Introduction to Classification, Classification by decision Tree, Attribute Selection Measure.

Section -D

Introduction to Prediction techniques, Accuracy of a Classifier, Cross-Validation, Bootstrap, Boosting, Bagging, Introduction to Clustering, Classification of Various Clustering Algorithms, Selecting and Using Right DM Technique, Selecting and Using Right DM Technique, Data Visualization.

Suggested Books:

1. Data Warehousing, Data Mining, and OLAP, Alex Berson, First Edition, Tata McGraw Hill
2. Data Mining Concepts & Techniques, Jiawei Han & Micheline Kamber, Second Edition, Morgan Kaufmann Publishers
3. Modern Data Warehousing, Mining & Visualization Core Concepts, George M Marakas, First Edition, Pearson Education
4. Data Warehousing, Architecture & Implementation, Hawkin, Prentice Hall
5. Data Mining: Modelling Data for Marketing, Risk and Customer Relationship Mgmt, Rud,Olivia, Paperback Edition

Programming in Java - BSBC -502**MST I SYLLABUS****SECTION A**

FUNDAMENTALS OF OBJECT-ORIENTED PROGRAMMING:- - Introduction; Object-Oriented Paradigm; Basic Concepts of Object-Oriented Programming Benefits of OOP; Applications of OOP JAVA EVOLUTION: - Java History; Java Features; How Java Differs from C and C++; Java and Internet, Java and World Wide Web, Web Browsers; Hardware and Software Requirements; Java Support Systems, Java Environment

OVERVIEW OF JAVA LANGUAGE: - Introduction; Simple Java Program; Comments in java; An application with Two Classes; Java Program Structure; Java Tokens; Java Statements; Implementing a Java Program; Java Virtual Machine; Command Line Arguments; Programming Style.

CONSTANTS, VARIABLES AND DATA TYPES: - Introduction; Constants; Variables; Data Types; Variables, Constants, Standard Default Values.

OPERATORS AND EXPRESSIONS: - Introduction to Operators, Expressions; Operator Precedence; Mathematical Functions.

DECISION MAKING, BRANCHING AND LOOPING: - Decision making and Branching Statements, Looping Statements, Labeled loops, Jumping Statements

SECTION B

CLASSES, OBJECTS AND METHODS: - Introduction; Defining a Class; Adding Variables; Adding Variables; Adding Methods; Creating Objects; Accessing Class Members; Constructors; Methods Overloading; Static Members; Nesting of Methods; Inheritance: Extending a Class; Overriding Methods; Final Variables and Methods; Final Classes; Finalizer Methods; Abstract Methods and Classes; Visibility Control.

ARRAYS, STRINGS AND VECTORS: - Arrays; Jagged Arrays;; Strings; String functions: Vectors; Wrapper Classes.

INTERFACES: Introduction; Defining Interfaces; Extending Interfaces; Implementing Interfaces; Accessing Interface Variables, Implementing Multiple Inheritance using Interfaces.

PACKAGES: Introduction; System Packages; Using System Packages; Naming Conventions; Creating Packages; Accessing a Package; Using a Package; Adding a Class to a Package; Hiding classes.

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MST II SYLLABUS**Section C**

MANAGING ERRORS AND EXCEPTIONS: - Introduction; Types of Errors; Exceptions; Exception Handling using Try, Catch and finally block; Throwing Our Own Exceptions; Using Exceptions for Debugging.

APPLET PROGRAMMING: - Introduction; How Applets Differ from Applications; Applet Life Cycle; Creating an Executable Applet; Passing Parameters to Applets; Aligning the Display; More about HTML Tags; Displaying Numerical Values; Getting Input from the User.

GRAPHICS PROGRAMMING: - Introduction; The Graphics Class; Lines and Rectangles; Circles and Ellipses; Drawing Arcs; Drawing Polygons; Line Graphs; Using Control Loops in Applets; Drawing Bar charts.

SECTION D

JAVA AWT- JAVA AWT package containers, basic user interface components, layouts

EVENT HANDLING: -Event delegation Approach; ActionListener; AdjustmentListener, MouseListener; MouseMotionListener; WindowListener; KeyListener; ItemListener

AVA I/O HANDLING : I/O File Handling(Input Stream & Output Streams, File Input Stream & FileOutputStream, Data I/P and O/P Streams, File Class, Reader and Writer Streams, Random Access

TEXTBOOK :

‘Introduction to Internet and Java’: by N.B Bansal, A.Kumar (Kalyani Publisher)

REFERENCES:

- Andrews Staunebaum Computer Networks (Tata McGraw Hill)
- Harley Haun The Internet Complete Reference (PHI)
- Mastering Java (BPB Publications)

MANAGEMENT INFORMATION SYSTEMSBC 503**MST I SYLLABUS****SECTION A**

Introduction to Systems and Basic Systems Concepts, Elements (Components) of System, Characteristics of System, Types of Systems, System Approach. Information Systems: Definition & Characteristics, Types of Information, Role of Information in Decision Making, Levels of Management. Introduction to different kinds of Information Systems: ESS, EIS, DSS, MIS, KWS, TPS, OAS and EDP.

SECTION B

An overview of Management Information System: Definition & Characteristics, Components of MIS, Frame Work for Understanding MIS: Robert Anthony's Hierarchy of Management Activity, Structured Vs Unstructured Decisions, Formal Vs. Informal Systems, Pitfalls in MIS Development.

MST II SYLLABUS**SECTION- C**

Simon's Model of Decision – Making. DSS: Concept, Characteristics and Components, Gorry & Scott Morton Grid, Introduction to GDSS.

Developing Information Systems: Analysis & Design of Information Systems: Implementation & Evaluation.

SECTION D

Functional MIS: A Study of Marketing, Personnel, Financial and Production MIS.

Suggested Books:

1. Management Information Systems, Goyal, D.P., Third Edition, Macmillan.
2. Management Information Systems, Oz, Effy, Thomson Press Indian Edition.
3. "Management Information Systems", Kanter, J., Third Edition, PHI.
4. "Management Information Systems", Davis, Gordon B. & Olson, M.H, Second Edition
5. "Information Systems for Modern Management", Murdick, Robert G., & Ross, Joel E., & Claggett, James R., Third Edition, PHI.

WORKSHOP ON ADVANCED WEB DEVELOPMENT BSBC 504
MST I SYLLABUS

Introduction to ASP.NET: .NET Framework (CLR, CLI, BCL), ASP.NET Basics, ASP.NET Page Structure, Page Life Cycle. Controls: HTML Server Controls, Web Server Controls, Web User Controls, Validation Controls, Custom Web Controls.

MST II SYLLABUS

State Management: View State, Control State, Hidden Fields, Cookies, Query Strings, Application State, Session State, Profile Properties, Master Pages, Themes, Site Navigation. Introduction to ADO.NET, Data Binding, Importing the SqlClient Namespace, Defining the Database Connection, Managing Content Using Grid View and Details View.

Security and User Authentication: Basic Security Guidelines, Securing ASP.NET Applications, ASP.NET Memberships and Roles. Working with Files and Email: Writing and Reading Text Files, Uploading Files, Sending Email with ASP.NET. Introduction to Web Services, Ajax, Silverlight.

Suggested Books:

1. Beginning ASP.NET 4: in C# and VB (Wrox), Imar Spaanjaars, Paperback Edition .
2. Sams Teach Yourself ASP.NET 4 in 24 Hours, Complete Starter Kit Scott Mitchell.
3. Microsoft ASP.NET 4 Step by Step (Microsoft), George Shepherd, Paperback Edition

SOFTWARE LAB-VI (Programming in Java) BSBC 505**MST I SYLLABUS**

1. Operators and Mathematical Functions.
2. Decision making, Branching and Looping Statements.
3. Classes, Objects and Methods.
4. Arrays, Strings and Vectors.
5. Interfaces

MST II SYLLABUS

6. Packages.
7. Exception handling.
8. Applet Programming.
9. AWT.
10. Event Handling.
11. I/O Handling.

BSBC 506 PROJECT WORK-I

Starting of Major Project named as Minor Project (Feasibility Study, Requirement Analysis and Design)

Tools for Minor Projects

Frontend VB or .NET (Either VB .Net or ASP .Net) or Java

Backend Sql Server or Oracle in Minor Projects normal applications and one database related application is must.

In Minor Projects 2 normal applications and one database related application is must .

Note: The break up of marks for the External practical will be as under

Viva Voce 15 marks

System Development 25 marks

DATE SHEET MST – I

DATE/DAY	MORNING (9:30a.m-11:30a.m)	EVENING (2:00p.m-4:00p.m)
19 September	Data Warehousing & Mining	Workshop on Advanced Web Development
20 September	Java Programming	Software Lab -VI
21 September	Management Information System	Project Work-I

DATE SHEET MST – II

DATE/DAY	MORNING (9:30a.m-11:30a.m)	EVENING (2:00p.m-4:00p.m)
31 st October	Data Warehousing & Mining	Workshop on Advanced Web Development
1 st November	Java Programming	Software Lab java
2 nd November	Management Information System	Project Work-I

FIFTH SEMESTER EXAMINATION – 2016

Fifth Semester Examination will be conducted in the month of November & December.

Date Sheet will be given by the Punjab Technical University; Generally University gives the date sheet before 2-3 weeks before the examination.

S.NO	DATE	DAY	SUBJECT
1			
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13			
14			

SEMESTER-VI (JANUARY-APRIL)

ACADEMIC CALENDER

S.NO.	DATE	DAY	EVENT
1	09 th Jan.	Monday	Beginning of Classes
2	20 th Jan.	Friday	Debate (Engineering Campus)
3	23 rd Jan.	Monday	Celebration of Girl Child Day
4.	25 th Jan	Wednesday	Debate (Management Campus)
5	28 th Jan.	Saturday	Blood Donation Camp
6	09 th Jan-28 th Jan	Monday-Saturday	1 Class Test ; 2 Case Studies(MBA) , 1 Case Study (B.Tech) , 1 Case Study (BCA) & 1 Case Study (BBA) , Presentation of 20% Students in Each Subject
7	30 th Jan	Monday	Allotment of 1st Assignment
8	31 st Jan	Monday	Compilation of Attendance & Completion of 25% of Syllabus
9	4 th Feb	Saturday	Submission of 1st Assignment
10	6 th - 9 th Feb.	Monday-Thursday	MST-I
11	13 th Feb. -14 th Feb.	Monday-Tuesday	Discussion of Answer Sheets With Students and Compilation of Marks.
12	18 th Feb.	Saturday	Athletic Meet

13	28 th Feb.	Tuesday	1 Class Test ; 2 Case Studies (MBA) , 1 Case Study (B.Tech) , 1 Case Study (BCA) & 1 Case Study (BBA) , Presentation of 60% Students in Each Subject
14	28 th Feb.	Tuesday	Compilation of Attendance & Completion of 60% of Syllabus
15	1 st Mar.	Wednesday	Allotment of 2 nd Assignment
16	7 th Mar.	Tuesday	Submission of 2 nd Assignment
17	7 th Mar.	Tuesday	Celebration Of International Women Day
18	11 th Mar.	Saturday	Ad – Mad Show
19	13 th Mar.-16 th Mar.	Monday-Thursday	MST-II
20	20 th Mar.-21 st Mar.	Monday-Tuesday	Discussion of Answer Sheets With Students and Compilation of Marks.
21	1 st Mar. – 31 st Mar.	Wednes - Friday	1 Class Test, 2 Case Studies (MBA) , 1 Case Study (B.Tech) , 1 Case Study (BCA) & 1 Case Study (BBA) , Presentation of 40% Students in Each Subject
22	31 st Mar.	Friday	Compilation of Attendance & Completion of 100% of Syllabus.
23	01 st April-08 th April	Saturday-Saturday	'Roshaan' - Cultural Extravaganza (Annual Function)
24	2 nd Week of April	Tentatively	Final Practical
25	21 th April	Tentatively	End Semester Examination

**BCA COURSE STRUCTURE AND TEACHING
SCHEME**

	SEMESTER-VI	MARKS INT	MARKS EXT	TOTAL MARK S
BSBC601	Principles of management	40	60	100
BSBC 602	Computer Graphics	40	60	100
BSBC 603	Computer Networks	40	60	100
BSBC 604	System Administration	60	40	100
BSBC 605	Software Lab IV (Computer Graphics)	60	40	100
BSBC 606	Project Work	120	80	200

BSBC 601 PRINCIPLES OF MANAGEMENT
MST I SYLLABUS

SECTION-A

Forms of Business Organizations and Ownership: Sole Proprietorship, Partnership, Joint Stock Company, Public & Private undertakings, Government Companies.

Management: Meaning & Definition of Management, Nature, Scope and its various functions.

SECTION-B

Planning: Nature and purpose, types, steps in planning process.

Decision Making: Strategic, tactical and Operational decision, decision making process, rationality in decision making Organizing: Nature, importance, the organizing process, organizational objectives, formal and informal Organization, organization chart

Span of Management: Factors determining effective span.

MST II SYLLABUS

SECTION-C

Departmentation: Definition, Departmentation by function, by territory, product/service customer group,

Management by objectives (MBO).

Authority: Delegation of Authority, Decentralization v/s Centralization.

Staffing: Definition, Manpower Management, factors affecting staffing, Recruitment and Selection,

Performance Appraisal, Importance of Training.

SECTION-D

Motivation: Theories of Motivation, Hierarchy of needs theory, Theory of X and Theory of Y. Leadership: Styles, Theories of Leadership, Trait Approach and situational approach, Managerial Grid.

Controlling: Meaning & nature, Steps in Controlling, Essentials of Effective Control Systems.

Suggested Books:

1. Essentials of Management, Koontz, Tenth Edition
2. Principles & Practices of Management, L.M.Prasad, Third edition
3. Management, Y. K. Bhushan, Fourth Edition
4. An Executive's Encyclopedia of Management Practices, Prof. Parag Diwan.

BSBC 602 COMPUTER GRAPHICS**MST I SYLLABUS****SECTION-A**

Introduction to Active and Passive Graphics, Applications of Computer Graphics.

Input devices: light pens, Graphic tablets, Joysticks, Trackball, Data Glove, Digitizers, Image scanner, graphs and type of graphs.

Video Display Devices-- Refresh Cathode Ray Tube, Raster Scan displays, Random Scan displays,

Architecture of Raster and Random Scan Monitors, Color CRT-monitors and Color generating techniques

(Shadow Mask, Beam Penetration) , Direct View Storage Tube, Flat-Panel Displays; 3-D Viewing

Devices, Raster Scan Systems, Random Scan Systems, Graphics monitors and workstations, Color Models (RGB and CMY), Lookup Table.

SECTION-B

Process and need of Scan Conversion, Scan conversion algorithms for Line, Circle and Ellipse, effect of

scan conversion, Bresenham's algorithms for line and circle along with their derivations, Midpoint Circle

Algorithm, Area filling techniques, flood fill techniques, character generation.

MST II SYLLABUS**SECTION-C**

2-Dimensional Graphics: Cartesian and need of Homogeneous co-ordinate system, Geometric transformations (Translation, Scaling, Rotation, Reflection, Shearing), Two-dimensional viewing transformation and clipping (line, polygon and text), Cohen Sutherland, Sutherland Hodgeman and Liang Barsky algorithm for clipping.

SECTION-D

Introduction to 3-dimensional Graphics: Geometric Transformations (Translation, Scaling, Rotation, Reflection, Shearing), Mathematics of Projections (parallel & perspective)

Introduction to 3-D viewing transformations and clipping.

Suggested Books:

1. D. Hearn and M.P. Baker, "Computer Graphics", PHI New Delhi; Second Edition, 1995
2. J.D. Foley, A.V. Dam, "Introduction to Computer Graphics", S.K. Feiner, J.F. Hughes, Addison-Wesley Publishing Company, R.L. Phillips. N.Y.; Second Edition, 1994.
3. R.A. Plastock and G. Kalley, "Computer Graphics", Second Edition, McGraw Hill, 1986.

BSBC 603 COMPUTER NETWORKS**MST I SYLLABUS****SECTION- A**

Data communications concepts: Digital and analog transmissions-Modem, parallel and serial, synchronous and asynchronous, Modes of communication: Simplex, half duplex, full duplex, Concept of multiplexing, De-multiplexing.

Types of Networks: LAN, MAN, WAN

Network Topologies: Bus, Star, Ring, Mesh, Tree, Hybrid Communication

Channels: Wired transmissions: Telephone lines, leased lines, switch line, coaxial cables-base band, broadband, optical fiber transmission.

SECTION- B

Wireless Transmission: (Standards and Specification) Microwave transmission, Infrared transmission,

Laser transmission, Radio transmission and Satellite transmission and Blue Tooth, Frequency Spectrum.

Communication Switching Techniques: Circuit Switching, Message Switching, Packet Switching.

Network Reference Models: OSI Reference Model, TCP/IP Reference Model,

Comparison of OSI andTCP/IP Reference Models.

MST II SYLLABUS**SECTION- C**

Data Link Layer Design Issues: Services provided to the Network Layer, Framing, Error Control (error detection and correction code), Flow Control, Data Link Layer in the Internet (SLIP, PPP). Types of Multiplexing: FDM, TDM, CDMA

SECTION- D

MAC sub layer: CSMA/CD/CA, IEEE standards (IEEE802.3 Ethernet, Gigabit Ethernet, IEEE 802.4

Token Bus, IEEE 802.5 Token Ring)

The Network Layer: Design Issues, Routing Algorithms: Optimality Principle, Shortest Path Routing,

Congestion Control Policies, Concept of Internetworking.

Suggested Books:

1. Computer Networks, Tanenbaum, Andrew, Fifth Edition, PHI
2. Data Communication and Networking, Behrouz A. Forouzan, Fourth Edition
- 3Computer Today, S.K. Basandra, First Edition, Galgotia

SYSTEM ADMINISTRATION BSBC 604**Handling Windows 2003 Server:**

Planning: Comparison of Microsoft OS (NT Server, 2000 server, 2003 server), Workgroups & Domains, choosing disk configuration, choosing Window Networking protocols.

Installing & configuration Installing windows 2003 Server, Windows 2003 server & registry, control panel, configuration protocols & bindings, network adapters, peripherals & devices, hard disk, printing & its client computer.

Managing resources: Managing users & group account, policies & profiles, system policy with system policy editor, disk resources, working with windows 2003 server, the resources, UNC.

Connectivity: Inter operating with Linux, Configuring remote access service.

Suggested Book:

MCSE: Windows 2003 Server Study Guide – Microsoft Certified Professional (BPB Publications)

SOFTWARE LAB-VII (Computer Graphics) BSBC 605

Implement the Following Algorithms using C/C++:-

Use of basic functions of graphic available in C++ like circle, putpixel, rectangle, arc, ellipse, floodfill, setcolor etc.

Use of basic primitive functions to show some animations.

Line Drawing Algorithm like Direct method, DDA and Bresenham's line algorithms. Draw a circle using polynomial, trigonometry method and Bresenham's Algorithm. Draw an ellipse using Bresenham's Algorithm.

To move a character along circle.

To show 2D Clipping and Windowing.

PROJECT WORK-II BSBC 606

Continuation to Project Work-I started in V semester (Code Generation, system testing, Installation and Operations & maintenance)

Tools for Project Work –II

Frontend VB or .NET (Either VB .Net or ASP .Net) or
Java

Reports -Crystal Reports

Backend Sql Server or Oracle

Note: The break up of marks for the external practical will be as under

Viva Voce 20 marks

System development 60 marks

DATE SHEET
MST - I

DATE/DAY	MORNING (9:30a.m-11:30a.m)	EVENING (2:00p.m-4:00p.m)
6 February	Principles of management	System Administration
7 February	Computer Graphics	Software Lab VII Computer Graphics
8 February	Computer Networks	Project Work - II

DATE SHEET
MST - II

DATE/DAY	MORNING (9:30a.m-11:30a.m)	EVENING (2:00p.m-4:00p.m)
13 march	Principles of management	System Administration
14 march	Computer Graphics	Software Lab VII Computer Graphics
15 march	Computer Networks	Project Work - II

SIXTH SEMESTER EXAMINATION – 2016

Sixth Semester Examination will be conducted in the month of April & May.

Date Sheet will be given by the Punjab Technical University; Generally University gives the date sheet before 2-3 weeks before the examination.

S.NO	DATE	DAY	SUBJECT
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