St. Xavier’s College–Autonomous
Mumbai
Syllabus
For 4th Semester Courses in
B.Voc (Tourism)
and
B. Voc (Software Development)
(June 2015 Onwards)
General Education Component

Theory Syllabus for Courses:

S.BVS.4.01/A.BVT.4.01  MEDIA & SOCIETY PART 2
S.BVS.4.02/A.BVT.4.02  CONTEMPORARY SOCIAL ISSUES
S.BVS.4.03/A.BVT.4.03  MICROECONOMICS
S.BVS.4.04/A.BVT.4.04  FUNDAMENTALS OF THE INDIAN CONSTITUTION
Learning Objectives:

- To build on the knowledge acquired in Semester III: Media and Society Part 1
- To develop an understanding of the role of media in contemporary society
- To critically analyze media’s depiction of the world
- To engage with important media theories

NO. OF LECTURES

Unit I: Media and Power

1. Political Economy of Mass Communication in India
2. Media & Propaganda
3. Noam Chomsky: Manufacturing Consent

Unit II: Media and Nationalism

1. Benedict Anderson: Imagined Community
2. Nationalism in Indian Context
3. Role of Indian Cinema in Nationalism
4. Role of Sports in Nationalism

Unit III: Orientalism

1. Edward Said: Orientalism
2. Analysis of popular media
3. Critique of Orientalism

Unit IV: Cinema and City (Mumbai)

1. The cinematic city: Depiction of Mumbai in Hindi and regional films
2. Mumbai through documentaries
3. Single screen to multiplex: Changes in film viewing and architecture of Mumbai

Evaluation:
CIA 1: Class Test

CIA 2: Group Assignment on Cinema and City. Analysing the depiction of Mumbai in Hindi and regional cinema as well as documentaries.

References:

Books

4. Clarke, David (ed) The Cinematic City
8. Majumdar, Ranjini. Bombay Cinema
9. Nayar, Pramod. Political Economy of Communications in India

Articles

4. Editorial, Cricket: Imagining the Nation, EPW, March 31, 2007

Audio-Visual Resources

1. Control Room (Documentary)
2. Peace, Propaganda and Promised Land (Documentary)
3. Invictus (2009) Director: Clint Eastwood
5. Edward Said: Orientalism (Documentary)
6. Chimamanda Adichie: The Danger of a Single Story (TED Talk)
7. Homeland (TV Series)
ST. XAVIER’S COLLEGE (AUTONOMOUS)

S.Y.B.Voc  
Course: 4.02

Title: CONTEMPORARY SOCIAL ISSUES

OBJECTIVES:

- To introduce and analyze the impact of contemporary social issues in our everyday lives
- To facilitate an objective understanding through readings and research papers on social issues
- To apply this skill in the vocation opted for by the students by using examples from their relevant fields of study
- Each module must be discussed in a socially inclusive manner

NO. OF LECTURES

UNIT I: India’s Global Footprint - India’s emerging new role in the global world  8

1. India’s Demographics and Geographical Orientation
2. The Development debate and the role of international funding agencies
3. Globalization or Glocalization

UNIT II: The Indian Diaspora – Identity and its social implications  8

1. Rise of the middle class
2. Politics of Identity and Representation.
3. Marginalization of social groups

UNIT IV: Technology and Communication and Social Change  6

1. India’s technology story – a social audit
2. Digital and Social media – its strengths and challenges
3. Communication and social change – bridging the rural-urban divide?

UNIT V: Space and Mobility  6
UNIT VI: Social issues (with special focus on age groups, differently abled and gender)

1. Conflict, Terrorism and Peace
2. Formal and Informal Sector
3. Urbanism as a way of life (food, leisure, gaming...)
4. Religion and Values
5. Secularism and Communalism

EVALUATION:

- First CIA Test: short essay type questions
- Second CIA Test: Presentations, where students will be expected to choose a social issue in contemporary India, and formulate and express their understanding and opinions of the issue.
- End Semester Exam: Essay type questions/ short answer/objective

Annotated Reference List:

Kadekar L.N., Sahoo, A.K., Bhattacharya G., (2009), Indian Diaspora: Historical & Contemporary Context, Rawat Publication

Kabeer, Naila (2008), Gender & Social Protection: Strategies in the Informal Sector, Routledge


Mander, Harsh (2015), Looking Away: Inequality, Prejudice and Indifference in New India, Speaking Tiger Books


Manchanda, Rita (2010), States in Conflict with their Minorities, Sage

Phadke, Shilpa; Khan, Sameera; Ranade, Shilpa (2011), Why Loiter?, Penguin India
ST. XAVIER’S COLLEGE (AUTONOMOUS)

S.Y.B.Voc  Course: 4.03

Title: MICROECONOMICS

Learning Objectives:

- To introduce students to basic microeconomics and some additional macroeconomics concepts.
- To enable the students to understand the nature of markets, pricing and behaviour of other individual economic variables.
- To encourage students to relate micro theory to the real world and in particular newspaper economics and macroeconomic issues.

Total No of Lectures: 45

NO. OF LECTURES

UNIT I: 4

Introduction to Microeconomics:

1. Distinction between microeconomics and macroeconomics.
2. Importance of the study of microeconomics.
UNIT II:

Demand and Elasticity:

1. Determinants of demand, the Law of Demand
   Case Study: Impact of technology on demand.

2. Meaning and types of elasticity, eg. price, income, cross and promotional elasticities.
   Simple numerical problems based on elasticity concepts.

3. Advertising and demand, need and impact of advertising, factors affecting advertising.
   Case Study: The relative importance of advertisements in Tourism and Software industries.

UNIT III:

Production:

1. Concepts of production, economies and diseconomies of scale-external and internal.
   Case Study: Comparison of diseconomies of scale in large private and public sector companies.

   Case studies on the influence of technology on:
   i. Supply
   ii. Local kiranas /grocers

UNIT IV:

Costs and Revenue:

1. Types of costs: money and real, fixed and variable, implicit and explicit, manufacturing and selling, opportunity cost, depreciation.
   Significance of cost concepts to a firm.

2. Revenue: Concepts of Total, Marginal and Average Revenue, Break even point.
UNIT V:

Objectives of a Firm: 5

Profit and sales/revenue maximization, growth, etc.

Case studies.

UNIT VI:

Markets: 10

Types of markets: Perfect competition, monopoly, monopolistic competition, oligopoly.

Case studies: oligopoly in tourism sector, nature of the market in the software industry.

First C.I.A.: MCQ Test

Second C.I.A.: Project (designed to test application of theory to reality)

Reference Books:


Additional References:


New Delhi,2008
Title: Fundamentals of the Indian Constitution [45 Lectures]

LEARNING OBJECTIVES

- To understand the basics of the Indian Constitution
- To familiarize students with the working of the governmental machinery

Unit I: Salient Features of the Indian Constitution [10 Lectures]

1. Origin and features of the constitution
2. Fundamental Rights
3. Basic Structure Doctrine

Unit II: The Union Executive: The President [10 Lectures]

1. Qualifications for election as President
2. Procedure for impeachment of the President
3. Powers of the President
4. Constitutional limitations on Presidents’ powers

Unit III: Prime Minister & Council of Ministers [15 Lectures]

1. Election of Prime Minister
2. Appointment of Ministers
3. Powers, functions and role of the cabinet
4. Special position of the Prime Minister in the Council of Ministers
5. Presidential System versus Parliamentary System of Government
Unit IV: The Judiciary

[10 Lectures]

1. Organization of the Judiciary (Hierarchy, Jurisdiction)

2. Judicial activism—Public Interest Litigation

C.I.A. 2: Presentation on Importance of Constitution vis-a-vis laws related to field of study

Text Books:

1. Jain, Ashok, *Indian Political System*

2. Wadhwani, Manohar R., *Indian Political System*

List of Reference Books:


2. Austin, Granville (1999), *The Indian Constitution: Cornerstone of a Nation*


St. Xavier’s College–Autonomous Mumbai
Syllabus
For 4th Semester Courses in B. Voc
(Software Development)
(June 2015 onwards)
Skill Component courses

Theory Course Syllabus for:

S.BVS.4.05  C#
S.BVS.4.06  Data Warehousing and mining
S.BVS.4.07  Mobile App Development using Android
S.BVS.4.08  Open Source Platforms (Linux, RoR)

Practical Course Syllabus for:

S.BVS.4.PR
Title: Programming in C#
Class: S.Y.B.Voc. Software Development
Course code: S.BVS.4.05

Learning Objective:
To equip the students with skills required in software industry. Students will learn the latest
development in C# and apply the skill learnt in projects.

Number of lectures: 45

Name of the unit | No. Of lectures
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UNIT 1: Understanding .NET environment | 5
.NET framework, Common Language Runtime, framework base classes, visual
studio IDE, .NET languages, benefits of .NET approach
what is C#, characteristics of C#, Applications, how does C# differ from C++
or Java, C# and .NET
UNIT 2: C# language Basics | 10
Overview of C# Literals, Variables, Data types, Operators, Expressions,
Branching and looping operations, methods, arrays, strings
UNIT 3: C# language advanced features | 15
Classes and Objects: class, objects, constructors, static members, static
constructors, private constructors, copy constructors, destructors, member
initialization, this reference, nesting of classes
Inheritance and Polymorphism: Classical inheritance, containment inheritance,
Defining a subclass, visibility control, Defining subclass constructors,
multilevel inheritance, Overriding methods, hiding methods, Abstract classes,
abstract methods
Interface: Defining an interface, extending an interface, Implementing
interface, Difference between interface and abstract class
Operator overloading
UNIT 4: Delegate, Events and Exception handling in C# | 15
Delegate declaration, delegate methods, Delegate’s instantiation, delegate
invocation, Using delegates, multicast delegates, Types of errors, exceptions,
Syntax of exception handling code, Multiple catch statement, The exception
hierarchy, general catch handler, Using final statement, nested try blocks,
Throwing our own exceptions, Checked and unchecked operators, Using
exceptions for debugging

Continuous Internal Assessment
Assignments / Project
Mid Term test.

Text Books
1. Programming in C# By E Balagurusamy

Reference Books
2. C# and .NET 4 by Christian wrox publication.
3. C# 2010 and .NET 4 platform by Andrew Troelsen Apress publication.
4. C# 3.0 A beginners guide by Herbert Schildt
Title: data warehousing and mining  
Class: S.Y.B.Voc. Software Development  
Course code: S.BVS.4.06

Learning Objective:
To know the basic concepts of Data Warehousing and data mining.

Number of lectures: 45

<table>
<thead>
<tr>
<th>Name of the unit</th>
<th>No. Of lectures</th>
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<tbody>
<tr>
<td>UNIT 1: INTRODUCTION TO DATA WAREHOUSING AND DIMENSIONAL MODELLING</td>
<td>12</td>
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<tr>
<td>Escalating need for strategic information</td>
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<td>Failure of decision support system</td>
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<td>Operational versus decision support system</td>
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<td>Data warehousing—the viable solution</td>
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<td>Defining data warehouse</td>
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<td>Data warehouse and data marts</td>
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<td>Architectural types</td>
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<td>Principles of dimensional modelling, star schema, advantages of star schema, snowflake schema, fact tables</td>
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<td>UNIT 2: ETL PROCESS</td>
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<tr>
<td>ETL overview: Data extraction, data transformation, data loading</td>
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<td>OLAP in data warehouse: demand for OLAP, major features and functions, OLAP models</td>
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<tr>
<td>UNIT 3: DATA MINING</td>
<td>20</td>
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<tr>
<td>The development of data mining, Basic data mining tasks, data mining issues, data mining versus Knowledge discovery in data bases.</td>
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<tr>
<td>Classification introduction, Statistical based algorithms, Bayesian classification, distance based algorithms, Simple approach, K nearest neighbour, Decision tree based algorithms, ID3.</td>
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<tr>
<td>Introduction of clustering, outliers, Hierarchical algorithms, agglomerative algorithms, single link algorithm, complete link algorithm, average link algorithm, Partitional algorithms, Minimum spanning tree, K-means clustering, nearest neighbour algorithm</td>
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Continuous Internal Assessment
Assignments / Project
Mid Term test.

Text Books

1. Data warehousing fundamentals by Paulraj Ponni
2. Data Mining Introductory and Advanced Topics, M. H. Dunham, Pearson Education
Title: Open Source Linux and RoR  
Class: S.Y.B.Voc. Software Development  
Course code: S.BVS.4.07

Learning Objective:
To encourage open source product usage for developing programs. Ruby on Rails is used for faster web development in Linux platform.

Number of lectures: 45

UNIT 1 (15 lectures)
Linux Basic
History of Linux, Comparison of Linux with Windows, Linux as Layered structure.

Linux commands
ls, rm, cp, cd, mkdir, mv, more, head, tail, pwd, chmod, tar, gzip, echo, date, cal, bc, cut, paste, sort command. grep with all options, awk with all options, man, info, ps, kill, fg, bg, redirection and pipe command. Linux Tree Structure, Creating user and assigning password, creating user defined command.

Linux shell scripts
vi Editor Basic Concepts, Shell Programming, Types of Shell, Environment Variables, Programming Construct: loops, conditions, logical operators, case constructs, if statement. Using regular expression in shell programming.

UNIT 2 (15 lectures)
Features of Ruby, variables in Ruby-global variable, instance variable, local variable

UNIT 3 (15 lectures)
RoR Framework, Directory structure. Advantages of using RoR.
Creating view in RoR, creating layout in RoR, Integrating RoR with database.
Scaffolding in RoR, Integrating CSS with RoR. Using gems in RoR. Validation on server and client side. Creating reports in RoR.

TEXT BOOKS
1. The Ruby Programming Language – David Flanagan – O’Reilly Publication
2. Linux and Unix –Sumitbha Das—TMH

REFERENCES BOOKS
1. Ruby On Rails Up And Running—O’relly publication

Websites
3) https://www.railstutorial.org/book
Learning Objective: To learn the concept of android program and develop app using java and XML.

Number of lectures: 45

<table>
<thead>
<tr>
<th>UNITS</th>
<th>Lectures</th>
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<tr>
<td>UNIT 1. Android Basic</td>
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<tr>
<td>• Android overview and architecture</td>
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<td>• Installation &amp; Configuration of Android Development tool and Java Kit.</td>
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<td>• AVD-Android virtual Manager</td>
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<td>• Android - Environment Setup</td>
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<td>• Android - Hello World Example</td>
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<td>• Android - Resources</td>
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<td>• Android - Activities</td>
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<td>• Android - Services</td>
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<td>• Android - Broadcast Receivers</td>
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<td>• Android - Content Providers</td>
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<td>• Android - Fragments</td>
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<td>• Android – Intents/Filters</td>
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<td>UNIT 2. Android - User Interface</td>
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<td>• Android - UI Layouts</td>
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<td>• Android - UI Controls</td>
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<td>• Android - Event Handling</td>
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<td>• .Android- Style &amp; Themes</td>
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UNIT 3. Android Advanced Concepts

- Android - Developer Tools
- Android - Emulator
- Android - Facebook Integration
- Android - Notifications
- Location Based Services
- Android - Sending Email
- Android - Sending SMS
- Android - Phone Calls
UNIT 4. Android Tool & Implementation

• Android – Menubar, Menu & MenuItem
• Android – Dialog Box
• Android - Animations
• Android - Audio Capture
• Android - AudioManager
• Android - Auto Complete
• Android - Best Practices
• Android - Bluetooth
• Android - Camera
• Android - Clipboard
• Android - Custom Fonts
• Android - Data Backup
• Android – Gestures

UNIT 5. Android Project Development

• Android- Building .APK File
• Android - Google Maps
• Android - Image Effects
• Android - ImageSwitcher
• Android - Internal Storage
• Android - JetPlayer
• Android - JSON Parser
• Android - Linkedin Integration
• Android - Loading Spinner
• Android - Localization
• Android - Login Screen
• Android - MediaPlayer
• Android - Multitouch
• Android - Navigation
• Android - Network Connection
• Android - NFC Guide
• Android - PHP/MySQL
• Android - Progress Circle
• Android - ProgressBar
• Android - Push Notification
• Android - RenderScript
• Android - RSS Reader
• Android - Screen Cast
• Android - SDK Manager
• Android - Sensors
• Android - Session Management
• Android - Shared Preferences
• Android - SIP Protocol
Continuous Internal Assessment

Assignments / Project

Mid Term test.

List of Text Books:

1. *Android Design Pattern: Interaction Design Solution for Developers* - (By: Greg Nudelman)

2. *Programming Android*
1. Write a console application to take input from the user and perform simple mathematical calculations on them—addition, subtraction, multiplication and division and display the result to the user.
2. Write a console application to generate the following series. (make use of nesting of loops)
   \[
   \begin{array}{cccccccc}
   1 & 2 & 3 & 4 & 5 & 1 & 2 & 3 & 4 & 5 & 5 & 4 & 3 & 2 & 1 & 1 \\
   1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 & 5 & 4 & 3 & 2 & 1 & 2 & 2 \\
   1 & 2 & 3 & 1 & 2 & 3 & 4 & 5 & 3 & 2 & 1 & 3 & 3 & 3 & 3 \\
   1 & 2 & 1 & 2 & 3 & 4 & 5 & 1 & 2 & 4 & 4 & 4 & 4 & 4 & 4 \\
   1 & 5 & 1 & 5 & 5 & 5 & 5 & 5 & 5 & 5 & 5 & 5 & 5 & 5 & 5 \\
   \end{array}
   \]
3. Write a console application to sort an array in ascending order.
4. Write a console application to generate Fibonacci series.
5. Write a console application to generate prime numbers in a given range.
6. Write a console application to find the sum of digits of a number and the reverse of the number.
7. Write a console application to generate the multiplication table of a number until the limit entered by the user.
8. Write a console application to find the factorial of a number.
9. Write a console based application to incorporate the features of class and object. The class should have default as well as parameterised constructors, member functions taking arguments.
10. Write a console based application to incorporate the feature of function overloading.
11. Write a console based application to incorporate the feature of overriding.
12. Write a console based application to incorporate the feature of inheritance.
13. Write a console based application to incorporate the feature of operator overloading.
14. Write a console based application to incorporate the feature of delegates and events.
15. Write a console based application to incorporate the feature of abstract classes and interfaces.
16. Write a console based application to incorporate exception handling.
PRACTICAL LIST FOR DATA WAREHOUSING

1. Importing the source data structures in Oracle.
2. Design the target data structure using Oracle
3. Create the target structure in OWB (Oracle Web Builder)
4. Designed and build the ETL mapping
5. Perform the ETL process and transform it to data marts.
6. Create the cube and process it in OWB.

DATA MINING

SOFTWARE WEKA

1) Create training data using ARFF File.
2) Implementation of Bayesian classification using any standard training data.
3) Implementation of decision tree based algorithm using any standard training data.
4) Implementation of agglomerative algorithms using any standard training data.
5) Implementation of divisive algorithms using any standard training data.

PRACTICAL LIST FOR LINUX AND ROR

Learning Objective:

To encourage open source product usage for developing programs. Ruby on Rails is used for faster web development.

Practical No 1

Create text file using vi editor in Linux with following details about emp with at least 10 records eno ename dept designation age salary.

Using AWK as a reporting tool with proper header and footer to find

a) All employee who work for sales dept
b) Average salary of all employees
c) Name and designation of all employees who earn more that Rs. 40000
d) Average salary of employees working with HR dept
e) Sum of salary of all the employees
f) Name the emp who all work for HR dept and earn less than Rs.20000
Practical No 2

Using Ruby find
   a) factorial of a number
   b) Sum of digits of a number
   c) Reverse a given string

Practical No 3

Using Ruby display the contents of a file.

Practical No 4

Create table student(rno,name,dob,course,photo) in MySQL. Now from Ruby using store corresponding information of 5 student. Now display information of particular student whose rno is asked.

Practical No 5

Create a registration form in html and develop a ruby/RoR application to accept Registration Details form user and Store it into the database table.

Practical No 6

Create a web application to show the form and apply corresponding validation.

username: 
password: 
email: 
gender: Select Gender 
postcode:
Submit

Practical No 7

Create class called student and demonstrate inheritance, polymorphism, encapsulation on it using ruby.


**Practical No 8**

Demonstrate the use of Scaffolding in RoR.

**Practical No 9**

Demonstrate creating blog using RoR.

**ANDROID Practical List:**

**Learning Objective:**

To introduce the concept android programming and develope app using android development studio.

**List of Practicals:**

Experiment 1. Android event handling using "onClick" event Listener and "actionListener".
Experiment 2: Android Background Music Activity
Experiment 3. Open a Website using android app.
Experiment 4: Sms Manager Activity
Experiment 5: Working with HTML webpages(Offline) in Android app
Experiment 6. Android app to play video file with controls
Experiment 7. Splash Screen effect
Experiment 8. Android Dialoge Box

**Assessment:**

CIA and End Semester Exam based on the practicals will be conducted.