

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

---

**Maharaja Ranjit Singh Punjab Technical University  
Bathinda-151001**



**FACULTY OF SCIENCES**

**SYLLABUS**

**FOR**

**B.A. (COMPUTER SCIENCE)**

**2023 BATCH ONWARDS**

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

<b>SEMESTER 1<sup>st</sup></b>		<b>Contact Hrs.</b>			<b>Marks</b>			<b>Credits</b>
<b>Subject Code</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Int.</b>	<b>Ext.</b>	<b>Total</b>	
<b>BACSS1-101</b>	General English - I	4	0	0	40	60	100	4
<b>BACSS1-102</b>	General Punjabi – I	4	0	0	40	60	100	4
<b>BACSS1-103</b>	Introduction Information Technology And Office Automation	4	0	0	40	60	100	4
<b>BACSS1-104</b>	Introduction Information Technology And Office Automation (Lab)	0	0	4	40	60	100	2
<b>Department Elective Subjects (Any Two)</b>								
<b>BACSD1-111</b>	History – I	4	0	0	40	60	100	4
<b>BACSD1-112</b>	Political Science – I	4	0	0	40	60	100	4
<b>BACSD1-113</b>	Mathematics – I	4	0	0	40	60	100	4
<b>BACSD1-114</b>	Physical Education – I	4	0	0	40	60	100	4
<b>BACSD1-115</b>	Elective English – I	4	0	0	40	60	100	4
<b>BACSD1-116</b>	Economics – I	4	0	0	40	60	100	4
<b>BACSD1-117</b>	Elective Punjabi - I	4	0	0	40	60	100	4
<b>BACSD1-118</b>	Sociology - 1	4	0	0	40	60	100	4
<b>BACSD1-119</b>	Elective Computer - I	4	0	0	40	60	100	4
<b>Total</b>		<b>20</b>	<b>0</b>	<b>4</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>22</b>

<b>SEMESTER 2<sup>nd</sup></b>		<b>Contact Hrs.</b>			<b>Marks</b>			<b>Credits</b>
<b>Subject Code</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Int.</b>	<b>Ext.</b>	<b>Total</b>	
<b>BACSS1-201</b>	General English - II	4	0	0	40	60	100	4
<b>BACSS1-202</b>	General Punjabi – II	4	0	0	40	60	100	4
<b>BACSS1-203</b>	Trends in IT and Office automation	4	0	0	40	60	100	4
<b>BACSS1-204</b>	Trends in IT and Office automation (Lab)	0	0	4	40	60	100	2
<b>Department Elective Subjects (Any Two)</b>								
<b>BACSD1-211</b>	History – II	4	0	0	40	60	100	4
<b>BACSD1-212</b>	Political Science – II	4	0	0	40	60	100	4
<b>BACSD1-213</b>	Mathematics (Algebra) - II	4	0	0	40	60	100	4
<b>BACSD1-214</b>	Physical Education – II	4	0	0	40	60	100	4
<b>BACSD1-215</b>	Elective English – II	4	0	0	40	60	100	4
<b>BACSD1-216</b>	Economics – II	4	0	0	40	60	100	4
<b>BACSD1-217</b>	Elective Punjabi – II	4	0	0	40	60	100	4
<b>BACSD1-218</b>	Sociology - II	4	0	0	40	60	100	4
<b>BACSD1-219</b>	Elective Computer - II	4	0	0	40	60	100	4
<b>Total</b>		<b>20</b>	<b>0</b>	<b>4</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>22</b>

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

<b>SEMESTER 3<sup>rd</sup></b>		<b>Contact Hrs.</b>			<b>Marks</b>			<b>Credits</b>
<b>Subject Code</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Int.</b>	<b>Ext.</b>	<b>Total</b>	
<b>BACSS1-301</b>	General English – III	4	0	0	40	60	100	4
<b>BACSS1-302</b>	General Punjabi – III	4	0	0	40	60	100	4
<b>BACSS1-303</b>	Computer networks and internet applications	4	0	0	40	60	100	4
<b>BACSS1-304</b>	Computer networks and internet applications (Lab)	0	0	4	40	60	100	2
<b>Department Elective Subjects (Any Two)</b>								
<b>BACSD1-311</b>	History – III	4	0	0	40	60	100	4
<b>BACSD1-312</b>	Political Science – III	4	0	0	40	60	100	4
<b>BACSD1-313</b>	Mathematics (Calculus) - III	4	0	0	40	60	100	4
<b>BACSD1-314</b>	Physical Education – III	4	0	0	40	60	100	4
<b>BACSD1-315</b>	Elective English – III	4	0	0	40	60	100	4
<b>BACSD1-316</b>	Economics – III	4	0	0	40	60	100	4
<b>BACSD1-317</b>	Elective Punjabi – III	4	0	0	40	60	100	4
<b>BACSD1-318</b>	Sociology - III	4	0	0	40	60	100	4
<b>BACSD1-319</b>	Elective Computer - III	4	0	0	40	60	100	4
<b>Total</b>		<b>20</b>	<b>0</b>	<b>4</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>22</b>

<b>SEMESTER 4<sup>th</sup></b>		<b>Contact Hrs.</b>			<b>Marks</b>			<b>Credits</b>
<b>Subject Code</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Int.</b>	<b>Ext.</b>	<b>Total</b>	
<b>BACSS1-401</b>	General English – IV	4	0	0	40	60	100	4
<b>BACSS1-402</b>	General Punjabi – IV	4	0	0	40	60	100	4
<b>BACSS1-403</b>	Multimedia & its applications	4	0	0	40	60	100	4
<b>BACSS1-404</b>	Multimedia & its applications (Lab)	0	0	4	40	60	100	2
<b>Department Elective Subjects (Any Two)</b>								
<b>BACSD1-411</b>	History – IV	4	0	0	40	60	100	4
<b>BACSD1-412</b>	Political Science – IV	4	0	0	40	60	100	4
<b>BACSD1-413</b>	Mathematics (Analytical Geometry) - IV	4	0	0	40	60	100	4
<b>BACSD1-414</b>	Physical Education – IV	4	0	0	40	60	100	4
<b>BACSD1-415</b>	Elective English – IV	4	0	0	40	60	100	4
<b>BACSD1-416</b>	Economics – IV	4	0	0	40	60	100	4
<b>BACSD1-417</b>	Elective Punjabi – IV	4	0	0	40	60	100	4
<b>BACSD1-418</b>	Sociology - IV	4	0	0	40	60	100	4
<b>BACSD1-419</b>	Elective Computer – IV	4	0	0	40	60	100	4
<b>Total</b>		<b>20</b>	<b>0</b>	<b>4</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>22</b>

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

<b>SEMESTER 5<sup>th</sup></b>		<b>Contact Hrs.</b>			<b>Marks</b>			<b>Credits</b>
<b>Subject Code</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Int.</b>	<b>Ext.</b>	<b>Total</b>	
<b>BACSS1-501</b>	General English – V	4	0	0	40	60	100	4
<b>BACSS1-502</b>	General Punjabi – V	4	0	0	40	60	100	4
<b>BACSS1-503</b>	Software Engineering	4	0	0	40	60	100	4
<b>BACSS1-504</b>	Software Engineering (Lab)	0	0	4	40	60	100	2
<b>Department Elective Subjects (Any Two)</b>								
<b>BACSD1-511</b>	History – V	4	0	0	40	60	100	4
<b>BACSD1-512</b>	Political Science – V	4	0	0	40	60	100	4
<b>BACSD1-513</b>	Mathematics (Differential Geometry) - V	4	0	0	40	60	100	4
<b>BACSD1-514</b>	Physical Education – V	4	0	0	40	60	100	4
<b>BACSD1-515</b>	Elective English – V	4	0	0	40	60	100	4
<b>BACSD1-516</b>	Economics – V	4	0	0	40	60	100	4
<b>BACSD1-517</b>	Elective Punjabi – V	4	0	0	40	60	100	4
<b>BACSD1-518</b>	Sociology - V	4	0	0	40	60	100	4
<b>BACSD1-519</b>	Elective Computer – V	4	0	0	40	60	100	4
<b>Total</b>		<b>20</b>	<b>0</b>	<b>4</b>	<b>240</b>	<b>360</b>	<b>600</b>	<b>22</b>

<b>SEMESTER 6<sup>th</sup></b>		<b>Contact Hrs.</b>			<b>Marks</b>			<b>Credits</b>
<b>Subject Code</b>	<b>Subject Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Int.</b>	<b>Ext.</b>	<b>Total</b>	
<b>BACSS1-601</b>	General English – VI	4	0	0	40	60	100	4
<b>BACSS1-602</b>	General Punjabi – VI	4	0	0	40	60	100	4
<b>BACSS1-603</b>	Introduction to Computer Network and Internet Programming	4	0	0	40	60	100	4
<b>BACSS1-604</b>	Introduction to Computer Network and Internet Programming (Lab)	0	0	4	40	60	100	2
<b>BACSS1-605</b>	Human Values and Professional Ethics	3	0	0	40	60	100	3
<b>Department Elective Subjects (Any Two)</b>								
<b>BACSD1-611</b>	History – VI	4	0	0	40	60	100	4
<b>BACSD1-612</b>	Political Science – VI	4	0	0	40	60	100	4
<b>BACSD1-613</b>	Mathematics (Analysis) - IV	4	0	0	40	60	100	4
<b>BACSD1-614</b>	Physical Education – VI	4	0	0	40	60	100	4
<b>BACSD1-615</b>	Elective English – VI	4	0	0	40	60	100	4
<b>BACSD1-616</b>	Economics – VI	4	0	0	40	60	100	4
<b>BACSD1-617</b>	Elective Punjabi – VI	4	0	0	40	60	100	4
<b>BACSD1-618</b>	Sociology - VI	4	0	0	40	60	100	4
<b>BACSD1-619</b>	Elective Computer – VI	4	0	0	40	60	100	4
<b>Total</b>		<b>23</b>	<b>0</b>	<b>4</b>	<b>280</b>	<b>420</b>	<b>700</b>	<b>25</b>

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

---

<b>Semester</b>	<b>Marks</b>	<b>Credits</b>
Semester – 1 <sup>st</sup>	600	22
Semester – 2 <sup>nd</sup>	600	22
Semester – 3 <sup>rd</sup>	600	22
Semester – 4 <sup>th</sup>	600	22
Semester – 5 <sup>th</sup>	600	22
Semester – 6 <sup>th</sup>	700	25
<b>Total</b>	<b>3700</b>	<b>135</b>

**PROGRAM OUTCOMES (POS)**

- PO1. The program enables the students to acquire communication efficacy which would help them to communicate effectively with the community as well as society.
- PO2. The students acquire knowledge in the field of social sciences, literature and humanities. Which make them sensitive and sensible enough?
- PO3. The program also empowers the graduates to appear for various competitive examinations or choose the post graduate programme of their choice.
- PO4. The program enables the students to acquire the knowledge with human values.
- PO5. The students will be kindled enough to think and act over for the solution of various issues prevailed in the human life.
- PO6. Programme provides the base to be the responsible citizen.

# **SEMESTER - I**

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**ਪੰਜਾਬੀ ਲਾਜਮੀ – I**

Subject Code: BACSS1-102

L T P C  
4 0 0 4

Duration: 60 Hrs.

**Course Outcomes (Cos) and mapping with program outcomes (POs)**

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	<b>Language Skills:</b> Enhance reading, writing, listening, and speaking skills in Punjabi	3	1	2			
CO2	<b>Vocabulary and Grammar:</b> Learn essential Punjabi vocabulary and grammar rules	3		2			
CO3	<b>Writing Skills:</b> Learn to write short essays, paragraphs, and simple compositions in Punjabi	3		2		1	
CO4	<b>Reading Comprehension:</b> Improve the ability to read and understand Punjabi Poems	2		1	2		

**ਪਾਠਕ੍ਰਮ**

1. ਅਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ
2. ਲੇਖ ਰਚਨਾ
3. ਵਿਆਕਰਨ: ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ

**ਯੂਨਿਟ – I (15 Hrs)**

(ੳ) ਕਾਵਿ ਸੁਮੇਲ ਪੁਸਤਕ ਵਿਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ।

(ਅ) ਕਵਿਤਾ ਦਾ ਕੇਂਦਰੀ ਭਾਵ।

**ਯੂਨਿਟ – II (15 Hrs)**

ਲੇਖ ਰਚਨਾ 500 ਸ਼ਬਦਾਂ ਵਿੱਚ ਚਲੰਤ ਮਸਲਿਆਂ ਤੇ।

**ਯੂਨਿਟ – III (15 Hrs)**

ਵਿਆਕਰਨ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਮਹੱਤਵ।

**ਯੂਨਿਟ – IV (15 Hrs)**

ਵਿਹਾਰਕ ਪ੍ਰਸ਼ਨ।

• **Recommended Books:-**

- (i) ਕਾਵਿ-ਸੁਮੇਲ (ਸੰਪਾਦਕ) ਡਾ. ਕਰਮਜੀਤ ਸਿੰਘ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ।
  - (ii) ਸਹਾਇਕ ਪੁਸਤਕਾਂ : ਬਰਾੜ, ਬੁਟਾ ਸਿੰਘ (ਡਾ.), ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ਲੁਧਿਆਣਾ 2008।
  - (iii) ਮਨਜੀਤ ਕੌਰ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਵਰਤੋਂ ਤੇ ਬਣਤਰ, ਲੋਕ ਗੀਤ ਪ੍ਰਕਾਸ਼ਨ, ਚੰਡੀਗੜ੍ਹ।
1. ਜੱਸਲ ਕੰਵਰਜੀਤ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਦੇ ਕੁਝ ਪੱਖ, ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ ਨਹਾਲ ਬਜਾਰ ਅਮ੍ਰਿਤਸਰ 2012

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**GENERAL ENGLISH- I**

**Subject Code: BACSS1-101**

**L T P C  
4 0 0 4**

**Duration: 60 Hrs.**

**Course Outcomes (Cos) and mapping with program outcomes (POs)**

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	<b>Language Proficiency:</b> Develop proficiency in the English Language	3	2	2		1	
CO2	<b>Vocabulary and Grammar:</b> Learn essential English vocabulary and grammar rules	3		2			
CO3	<b>Writing Skills:</b> Learn to write paragraphs in English	3		2		1	
CO4	<b>Reading Comprehension:</b> Improve the ability to read and understand English Poetry and Prose	2		1	2		

**UNIT-1 Peotry (15 Hrs.)**

1. Song 36 from Gitanjali – Rabindernath Tagore.
2. Pippa's song - Robert Browning.
3. women's rights annie lennox walker.
4. The soul's prayer - Sarojini naidu.

**UNIT-2 Prose (15 Hrs.)**

1. Spoken English and broken English – G.B shaw.
2. Garif – Antor Chekov.
3. Uncle podger hangs a picture -Jerome k Jerome.
4. The doll's house - Katherine Mansfield.

**UNIT-3 (15 Hrs.)**

1. Paragraph writing –Discriptive & Narrative?
2. Comprehensiom of passage prose text.

**UNIT-4 (15 Hrs.)**

- i.) Grammer →voice,Determiner,modals,antonyms.
- ii.) Translation→ from varnacular to English (four out of six sentences)

**Textbook:-**

- i.) The poetic palatte (orient blackswan, for-1/2Sem Second edition, 2016)
- ii.) Prose parables (orient black swan,2013)
- iii.) English at work (selection from poetry & prose Vijay kumar, B.T. Seetha, A.V Suresh Kumar, Y.L. Srinivas, New Delhi; Macmillan, India Ltd.2012 (Punjab University) revised edition.



**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**INTRODUCTION INFORMATION TECHNOLOGY AND OFFICE AUTOMATION**

Subject Code: BACSS1-103

L T P C  
4 0 0 4

Duration: 60 Hrs.

**Course Outcomes (Cos) and mapping with program outcomes (POs)**

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	<b>IT Fundamentals:</b> Introduce students to the basic principles and concepts of information technology like hardware, software, networks, Input devices and output devices			3		2	
CO2	<b>Office Automation Tools:</b> Familiarize students with commonly used office automation tools such as word processors, spreadsheets and email applications			2		3	
CO3	<b>Internet and Web Browsing:</b> Acquaint students to internet usage and web browsing	1		3		3	

**UNIT-I (15 Hrs.)**

**Computer Fundamentals:** Block diagram of a Computer, Characteristics of Computers, Hardware, Software, Machine Language, Assembly Language and Assembler, High Level Language and Compiler v/s Interpreter.

**Computer software:** Types of software, application software and system software.

**Input Devices:** Keyboard, Mouse, Joystick, Track Ball, Touch Screen, Light Pen, Digitizer, Scanners, monitors, printers, plotters.

**Output Devices:** Monitors, Impact Printers - Dot matrix, Character and Line printer, non impact Printers – DeskJet and Laser printing, Plotter

**UNIT-II(15 Hrs.)**

**Memories:** Memories: Main Memories - RAM ROM and Secondary Storage Devices - Hard Disk, Compact Disk and DVD.

**File Manipulation:** Creating, Deleting, copying, renaming file.

**Introduction to Internet:** Evolution of Internet, Internet Applications, WWW, E-mail, FTP, TELNET, Web Browsers.

**UNIT-III (15 Hrs.)**

**Word Processing Tool:** Salient features of Word Processing, File, Edit, View, Insert, Format, Tools, Tables, Window, help options and all of their features, Options and Sub Options etc.,

**Windows:** Windows concept, Features, Desktop, Windows, And Accessories: Paint, Notepad, WordPad etc, Window Explorer, And Organization of data in Windows.

**UNIT-IV (15 Hrs.)**

**Presentation Tool:** Making Presentations, Inserting Objects, and Animations.

**Spreadsheet Tool:** Excel Worksheet, Data Entry, Editing, Cell Addressing ranges, Commands, Menus, Copying & Moving Cell Content, Inserting and Deleting Rows and Column, Column formats, Cell Protection, Printing, Creating, Displaying and Printing Graphs, Statistical Functions.

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

---

**Recommended Books:**

1. V. Rajaraman, 'Fundamentals of Computers', 5th Edn., PHI, 2010.
2. Satish Jain, 'Information Technology Concepts', ns, 4th Edn., BPB Publications, 2006.
3. Turban, Mclean and Wetherbe, 'Information Technology for Management', 4th Edn., John Wiley & Sons, 2006.
4. G. Courter, 'Mastering MS Office 2000 Professional', 3rd Edn., BPB Publication, 2006.
5. Steve Sagman, 'MS Office 2000 For Windows', 3rd Edn., Addison Wesley, 2008.

MRSPTU

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**HISTORY – I**

**Subject Code: BACSD1-111**

**L T P C  
4 0 0 4**

**Duration: 60 Hrs.**

**Course Outcomes (Cos) and mapping with program outcomes (POs)**

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	<b>Chronological Understanding:</b> Develop a chronological understanding of Ancient Indian History		2	3		1	
CO2	<b>Civilizations and Empires:</b> Study the rise and fall of significant ancient civilizations and empires in India, such as the Indus Valley Civilization, Maurya Empire, Gupta Empire, etc.		1		1	1	
CO3	<b>Cultural and Religious Heritage:</b> Explore contribution of different religions like Jainism and Buddhism				1	1	1

**UNIT– I (15 Hrs.)**

Ancient Indian History and its Importance, Physical Features and Impact, Sources of Early Indian History.

ਪ੍ਰਾਚੀਨ ਭਾਰਤ ਦਾ ਇਤਿਹਾਸ ਅਤੇ ਮਹੱਤਵ, ਭਾਰਤ ਦੀਆਂ ਭੂਗੋਲਿਕ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਪ੍ਰਭਾਵ, ਪ੍ਰਾਚੀਨ ਭਾਰਤ ਦੇ ਸੋਮੇ।

**UNIT– II (15 Hrs.)**

Indus Valley Civilizations or Harappa Culture, The Early Vedic Age, Later Vedic Age.

ਸਿੰਧੂ ਘਾਟੀ ਦੀ ਸਭਿਅਤਾ ਜਾਂ ਹੜੱਪਾ ਸੰਸਕ੍ਰਿਤੀ, ਮੁੱਢਲਾ ਵੈਦਿਕ ਕਾਲ, ਉੱਤਰ ਵੈਦਿਕ ਕਾਲ।

**UNIT– III (15 Hrs.)**

Jainism and Buddhism, Alexander's Invasion of India, The Maurya Empire, The Kushana Empire, The Gupta Empire

ਜੈਨ ਧਰਮ ਅਤੇ ਬੁੱਧ ਧਰਮ, ਸਿੰਕਦਰ ਦਾ ਭਾਰਤ ਉੱਤੇ ਹਮਲਾ, ਮੌਰੀਆ ਸਾਮਰਾਜ, ਕੁਸ਼ਾਣ ਸਮਰਾਜ, ਗੁਪਤ ਸਮਰਾਜ।

**UNIT– IV (15 Hrs.)**

Harsha Vardhana and His Time, Principal Dynasties of South India, Origin and Rise of the Rajputs.

ਹਰਸ਼ਵਰਧਨ ਅਤੇ ਉਸਦਾ ਸਮਾਂ, ਦੱਖਣੀ ਭਾਰਤ ਦੇ ਮਹੱਤਵਪੂਰਣ ਰਾਜਵੰਸ਼, ਰਾਜਪੂਤਾਂ ਦੀ ਉਤਪੱਤੀ ਅਤੇ ਉਥਾਨ।

**Books: -**

ਪ੍ਰਾਚੀਨ ਭਾਰਤ ਦਾ ਇਤਿਹਾਸ (Ancient History of India) Writer Dr. A.C. Arora  
A.D. : - (Starting to 1200 CE)

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**POLITICAL SCIENCE - I**

**Subject Code: BACSD1-112**

**L T P C  
4 0 0 4**

**Duration: 60 Hrs.**

**Course Outcomes (Cos) and mapping with program outcomes (POs)**

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	<b>Introduction:</b> Familiarize students with the discipline of political science, theories of origin of states		2	3			1
CO2	<b>Political Thinkers:</b> To acquaint students to the concepts of various political thinkers and philosophers		2	2	1		1
CO3	<b>Political Theories and Ideologies:</b> Explore major political theories and ideologies			3	1	1	

**UNIT – I (15 Hrs.)**

- Political Theory – Ancient, Traditional and Modern - Distinction between Political Theory and Political Science.
- Relationship of Political Science with Social Sciences.

**UNIT – II (15 Hrs.)**

- The State : Meaning and Its Elements - distinction Between State and society.
- Theories of the origin of State: - Social Contract theory and Historical Evolutionary Theory.

**UNIT – III (15 Hrs.)**

- Liberal, Marxist and Gandhian View of State function of state - Socialist Perspective
- Functions of state: Liberal Theory Welfare State : Concept and functions

**UNIT – IV (15 Hrs.)**

- Sovereignty Meaning - Sovereignty and Its Monistic Theory, Austin theory of Sovereignty
- Pluralistic Theory of Sovereignty and Political Systems: Main Element of Political System, Main Structure of Political System.

**Recommended Books:**

1. Political Theory – J.S. Badyal, Raj Publications
2. Comparative Political System and International Politics – J.S. Badyal

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**MATHEMATICS -I**

**Subject Code: BACSD1-113**

**L T P C  
4 0 0 4**

**Duration: 60 Hrs.**

**Course Outcomes (Cos) and mapping with program outcomes (POs)**

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	<b>Graphing and Functions:</b> Develop an understanding of graphing techniques and functions to visualize and analyze mathematical relationships			3		2	
CO2	<b>Probability and Statistics:</b> Introduce students to probability theory and basic analysis and interpretation		1	2		3	
CO3	<b>Calculus Concepts:</b> Introduce fundamental concepts of calculus			2		2	

**UNIT-I (15 Hrs.)**

Set Theory: Sets, Type of sets, set operations, Principle of Inclusion-Exclusion, Cartesian product of sets, Partitions.

Logic: Propositions, Implications, Precedence of logical operators, Truth table, Arguments and validity of arguments, equivalence and implication laws of logic, Principle of Mathematical induction.

Relations: Relations and diagraph, n-ary relations and their applications, properties of relations, representing relations, closure of relation, equivalence relation, operation on relations, partial ordering. Functions: Functions, One-to-one Functions, Onto Functions, Inverse and Composition of Functions, Floor Function, Ceiling Function.

**UNIT-II (15 Hrs.)**

Integration by Partial fractions, integration of rational and irrational functions, Properties of definite integral, Reduction formulae for integrals of rational, trigonometric, exponential and logarithmic function and of their combinations.

**UNIT-III(15 Hrs.)**

Graph Theory. Graphs: Introduction to Graph, Graph terminology, Representing graphs and Graph Isomorphism, Connectivity, Euler Paths and Circuits, Hamiltonian paths and circuits, Shortest Path Problems, Planar Graphs.

Trees: Trees, labeled trees, Tree Traversal, Undirected trees, Spanning Trees, Minimum spanning trees.

**UNIT-IV(15 Hrs.)**

Probability: Definition, Addition law of Probability, Multiplication law, Binomial Distribution, Poisson distribution, Normal Distribution

Statistics and Applications of Logarithms: Introduction to Statistics, Measures of Central Tendency- Mean, Median and Mode, Measures of Dispersion, Mean Deviation, Standard Deviation and Coefficient of Variation. Problems related to Compound Interest, Depreciation and Annuities.

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**PHYSICAL EDUCATION - I**

Subject Code: BACSD1-114

L T P C

Duration: 60 Hrs.

4 0 0 4

Course Outcomes (Cos) and mapping with program outcomes (POs)

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	<b>Physical Fitness:</b> Improve the understanding of Physical Fitness concepts and practice			2		3	1
CO2	<b>Motor Skills Development:</b> Enhance the students' motor skills like running, jumping, throwing, catching, kicking and other fundamental movement			2		2	
CO3	<b>Teamwork and Cooperation:</b> Promote teamwork, cooperation, and sportsmanship through various sports and group activities	1		2		1	1
CO4	<b>Health Awareness:</b> Raise awareness about the importance of regular physical activity for maintaining overall health			1		3	
CO5	<b>Physical Education and Lifelong Activity:</b> Foster an understanding of the importance of lifelong		1			1	1

**(THEORY – 60 MARKS)**

**UNIT – I (15 Hrs.)**

- **Physical Education:** Introduction, Objectives, Scope and Importance of Physical Education in the modern society.
- **Health Education:** Introduction, Aim & objectives, Principles and its Importance.
- **Olympic Games:** Introduction, Organization, Administration and Ceremonies of Ancient and Modern Olympic Games.
- **Asian & Commonwealth Games:** Introduction, Ceremonies, Venues.

**UNIT – II(15 Hrs.)**

- **Growth and Development:** Introduction, Difference, Development Characteristics at Different stages of Development and factors affecting growth & Development.
- **Heredity and Environment:** Introduction, Effect of Heredity & Environment on Growth & development, Chronological age, Anatomical age and Physiological age.
- **Personal Hygiene:** Introduction, Personal Cleanliness, Rest, Relaxation and Sleep.

**UNIT – III(15 Hrs.)**

- **Terminologies of Physical Education:** Kinesiology, Anatomy, Physiology Exercise Physiology, Bio Mechanics, Anthropometry and Sports Medicine.
- **Cell:** Structure, Parts and its Function.
- **Digestive System** : Introduction, Structure, Organs & Functions of Digestive System

**UNIT – IV(15 Hrs.)**

- **Athletics:** Introduction, Classification of Events, General Rules of Track Events and Types of Start & Finish.
- **Football:** History, Laws of the Game, Major tournaments and Arjuna Awardees.
- **Volleyball:** History, Layout, General Rules and Regulation, Officials, Major Tournaments and Arjuna Awardees.

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

---

**PRACTICAL (40 MARKS)**

**VOLLEYBALL, FOOTBALL AND SPRINTS (ATHLETICS)**

Evaluation will be based on skill test, Performance, Practical file and Viva Voce.

**Recommended Books:**

1. Dr. Nishan Singh Deol (1980): Text Book of Physical Education & Sports. (AP Publishers, Jalandhar)
2. Singh Ajmer et al (2000): Modren Text book of Physical Edcation, Health and Sports, Kalyani Publishers, Ludhiana.

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**ELECTIVE ENGLISH – I**

**Subject Code: BACSD1-115**

**L T P C  
4 0 0 4**

**Duration: 60 Hrs.**

COs	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO1	<b>Improving Language Proficiency:</b> Enhance overall language skills, including speaking, listening, reading, and writing, to communicate effectively in English			2		3	1
CO2	<b>Grammar and Vocabulary:</b> Develop a solid understanding of English grammar rules			2		2	
CO3	<b>Writing Skills:</b> Develop the ability to write clear, coherent, and organized letters	1		2		1	1

**UNIT-I (15 Hrs.)**

- Literary Terms: ballad ode, sonnet. Dramatic Monologue, Interior Monologue, Blank verse, free verse, Mock Epic. Metaphysical Conceit, Negative capability, Egotistical sublime, fancy, imagination, Irony, Paradox, Ambiguity, Alliteration, Assonance, Imagery.

**UNIT-II (15 Hrs.)**

- letter writing- official
- Applied Grammar - Voice, Direct Indirect

**UNIT-III (15 Hrs.)**

- Transformation of Sentences- Simple compound complex,
- Articles, Proposition, conjunctions
- Vocabulary - Antonyms/Synonym,
- Uses of words Phrases in English.

**UNIT-IV (15 Hrs.)**

- Text Prescribed from Fluency in English.
  - (a) Inzy Lets things Flow over Him. - Kadamba Murali
  - (b) Haroun and the sea of stories. : Salman Rushdil.
  - (c) Sisters-Poem : Saleem Peeradina
  - (d) Understanding Satire - A Ten Day Test: Harishanker Passai
  - (e) Go, kiss the world- Subroto Bagachi
  - (f) Amaltanti : Nirendranath Chakrabarti
  - (g) Hitting Downy for a six- Kalpana Sharma
  - (h) Chocolate : Manju Kapur
  - (i) Ref Book :

*Fluency in English: Ed Promodini Verma, Mukti Sanyal, Tulika Prasad, New Delhi- Macmillan India, 2009 .*



**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**ECONOMICS -I**

**Subject Code: BACSD1-116**

**L T P C  
4 0 0 4**

**Duration: 60 Hrs.**

COs	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO1	To provide students with an overview of the economics concepts, theories and models related to micro economics		2	2		3	1
CO2	To understand the fundamental principles of supply and demand and how they determine market prices and quantities		2	2	1	2	
CO3	To study firm behavior, production theory, cost analysis and how firms make production and pricing decisions in different market structures		2	2		3	1

**UNIT – I (15 Hrs.)**

Introduction: Definition, Meaning, Nature and scope of Economics.

Theory of Demand and Consumer Behaviour Utility Analysis & Indifference Curve Analysis, Law of Demand & Exceptions. Elasticity of Demand its Measurement consumer surplus & its measurement.

**UNIT – II (15 Hrs.)**

Theory of production and costs: Concept, law of variable proportions & Law of Return to scale. Cost concept.

Market forms and Revenue: Behaviour of Average Revenue and Marginal Revenue under perfect competition. Relationship Between Average Revenue, Marginal Revenue.

**UNIT – III (15 Hrs.)**

Price and Output Determination: Determination of the firm & industry under perfect competition, monopoly – In short and long seen.

**UNIT – IV (15 Hrs.)**

Distribution: Marginal productivity and modern theories of wage determination.

Theory of interest, risk and uncertainty theories of profit.

*Ref Books:*

(a) *Microeconomics – TR Jain ,Mukesh Trehan ,AS Sandhu*

(b) *Microeconomics- Chopra P.N , Theory & welfare economics ,Kalyani Publishers ,New Delhi.*

(c) *Microeconomics- Chopra P.N ,Singh Joginder & Grewal ,PS ( Punjabi Medium) Latest edition Price Theory & Distribution ,Kalyani Publishers ,Ludhiana.*

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**ਪੰਜਾਬੀ ਇਲੈਕਟਿਵ - I**

Subject Code: BACSD1-117

L T P C  
4 0 0 4

Duration: 60 Hrs.

COs	Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO1	<b>Language Skills:</b> Enhance reading, writing, listening, and speaking skills in Punjabi	3	1	2			
CO2	<b>Writing Skills:</b> Learn to write story in Punjabi	3		2		1	
CO3	<b>Reading Comprehension:</b> Improve the ability to read and understand Punjabi text written by famous authors, poems by Punjabi poets	2		1	2		

**ਪਾਠਕ੍ਰਮ**

1. ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ ਦਾ ਅਧਿਐਨ
2. ਭਾਸ਼ਾ ਤੇ ਪੰਜਾਬੀ (ਭਾਸ਼ਾ)
3. ਸਾਹਿਤ ਦੇ ਰੂਪ

**ਯੂਨਿਟ - I (15Hrs)**

(ੳ) 'ਨਕਸ਼ਨੁਹਾਰ' ਪੁਸਤਕ ਵਿੱਚੋਂ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ।  
(ਅ) ਕਾਵਿ ਸੰਗ੍ਰਹਿ ਵਿੱਚੋਂ ਕਿਸੇ ਇਕ ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ।

**ਯੂਨਿਟ - II (15Hrs)**

ਭਾਸ਼ਾ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਭਾਸ਼ਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਮਹੱਤਵ

**ਯੂਨਿਟ - III (15Hrs)**

ਸਾਹਿਤ ਦੇ ਰੂਪ : ਕਵਿਤਾ, ਗੀਤ, ਗਜਲ।

**ਯੂਨਿਟ - IV (15Hrs)**

ਇਕਾਂਗੀ, ਕਹਾਣੀ (ਸਾਹਿਤ ਦੇ ਰੂਪ), ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ।

**ਕੋਰਸ**

'ਨਕਸ਼ਨੁਹਾਰ' (ਸੰਪਾਦਕ) ਡਾ. ਜਸਵਿੰਦਰ ਸਿੰਘ ਆਧੁਨਿਕ ਪੰਜਾਬੀ ਕਵਿਤਾ (1901 ਈ. ਤੋਂ 2000 ਈ. ਤੱਕ)।  
ਸਹਾਇਕ ਪੁਸਤਕਾਂ: (ਨਿਰਧਾਰਿਤ ਕਵੀ: ਭਾਈ ਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਧਨੀ ਰਾਮ ਚੜ੍ਹਕ, ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਬਾਵਾ ਬਲਵੰਤ, ਸ਼ਿਵ ਕੁਮਾਰ ਬਟਾਲਵੀ, ਡਾ. ਹਰਭਜਨ ਸਿੰਘ, ਡਾ. ਜਗਤਾਰ।)

1. ਬਰਾੜ, ਬੂਟਾ ਸਿੰਘ (ਡਾ.) ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ਼੍ਰੇਣੀ ਤੇ ਸਰੂਪ ਵਾਰਿਸ਼ ਸ਼ਾਹ ਫਉਡੇਸ਼ਨ, ਅਮ੍ਰਿਤਸਰ 2012।
2. ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ (ਆਧੁਨਿਕ ਕਾਲ) ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ ਪਟਿਆਲਾ।

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**SOCIOLOGY - I**

**Subject Code: BACSD1-118**

**L T P C  
4 0 0 4**

**Duration: 60 Hrs.**

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	Articulate a sociological perspective. Apply sociological theories to understand social phenomena.		2	3			1
CO2	Critically evaluate explanations of human behavior and social phenomena		2	2	1		1
CO3	Use sociological knowledge to inform policy debates and promote public understanding.			3	1	1	

**UNIT- I (15 Hrs.)**

- Introduction to Sociology:- ਸਮਾਜ ਵਿਗਿਆਨ ਦੀ ਭੂਮਿਕਾ, ਸਮਾਜ ਵਿਗਿਆਨ ਦਾ ਜਨਮ ਤੇ ਵਿਕਾਸ
- ਸਮਾਜ ਵਿਗਿਆਨ ਦੀ ਪ੍ਰਕਿਰਤੀ, ਸਮਾਜ ਵਿਗਿਆਨ ਦੀ ਅਸਲ ਪ੍ਰਕਿਰਤੀ।

**UNIT- I (15 Hrs.)**

- ਮਨੁੱਖੀ ਸਮਾਜ, ਸਮਾਜ ਦਾ ਆਮ ਸਰੂਪ, ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਵਿਅਕਤੀ ਅਤੇ ਸਮਾਜ
- ਸਮਾਜਿਕ ਸਮੂਹ

**UNIT- I (15 Hrs.)**

- ਸੰਸਕ੍ਰਿਤੀ, ਅਰਥ, ਪਰਿਭਾਸ਼ਾ, ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਸੰਸਕ੍ਰਿਤੀ ਦੇ ਕਾਰਜ ਕਿਸਮਾਂ, ਸੰਸਕ੍ਰਿਤਕ ਪਛੜਾਪਨ, ਸੰਸਕ੍ਰਿਤੀ ਤੇ ਸੱਭਿਅਤਾ।

**UNIT- I (15 Hrs.)**

- ਸਮਾਜੀਕਰਣ:- ਅਰਥ, ਪਰਿਭਾਸ਼ਾ, ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਤੇ ਸਾਧਨ
- ਸਮਾਜਿਕ ਨਿਯੰਤਰਣ:- ਅਰਥ ਪਰਿਭਾਸ਼ਾ, ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ, ਲੋੜ, ਸਾਧਨ

**Recommended Books:**

1. ਸਮਾਜ ਵਿਗਿਆਨ ਨਾਲ ਜਾਣ-ਪਛਾਣ (ਡੋਕੀ ਐਂਜਲਾ)
2. ਸਮਾਜ ਸ਼ਾਸਤਰ ਦਾ ਪਾਠਕ (ਮਧੁਰਿਮਾ)
3. ਸਮਾਜਿਕ ਸੰਸਥਾਵਾਂ (ਡਾ. ਸੁਕੱਨਿਆ ਦਾਸ)
4. Bhushan Vidya & Sachdeva D.D (2014): An Introduction of Sociology Kilab Maal Allahabad

**MRSPTU B.A. (COMPUTER SCIENCE)  
SYLLABUS 2023 BATCH ONWARDS**

**ELECTIVE COMPUTER-I**

**Subject Code: BACSD1-119**

**L T P C**

**Duration: 60 Hrs**

**4 0 0 4**

COs	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
CO1	Understand, analyze and create web pages using HTML			3		2	
CO2	Understand, analyze and build interactive web applications			2		3	
CO3	Students should be able to design and implement a basic website.	1		3		3	

**UNIT - I**

**Basic Terminology:** Introduction to web programming, Website, Webpage, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL, client server architecture, internet domains.

**Introduction to HTML:** Basics of HTML5, difference between HTML & HTML5, Structure of an HTML program, understanding document tags.

**UNIT - II**

**HTML5 formatting:** Formatting tags e.g. font, Bold, italic, super script, subscript, delete, mark etc.

**Lists:** Unordered List, Ordered Lists, Definition lists.

**Adding Images:** Img element using Border, Width, Height, Align, ALT Attributes

**UNIT - III**

**Introduction to LINK:** anchor element, internal linking and external linking, attribute of anchor tag.

**Tables:** Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attribute

**UNIT - IV**

**HTML Frames:** Introduction to frameset tag, frame tag, iframes and respective attributes.

**Forms:** Attributes of Form element, Input element: Text Element, Password, Button, SubmitButton, Reset Button, The Checkbox, Radio, Text Area, Select and Option.

*\*Faculty members can take practical sessions during the lectures.*

**Recommended Books:**

1. Kogent Learning Solutions Inc., "HTML 5 in simple steps", Dreamtech Press.
2. Murray, Tom/Lynchburg, "Creating a Web Page and Web Site", 2002.
3. Steven M. Schafer, "HTML, XHTML, and CSS Bible, 5ed", Wiley India.