# Bharatiya Jain Sanghatana's Arts science and Commerce College

## Course Outcome (CO)

| Program | Subject | CO | | |
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| **B.Sc.** | **Chemistry** | **Course Code** | **Name of the Subject** | **Course Outcome** |
| | | | **Physical Chemistry** | • Understand the role of computers in simulating chemical processes and analyzing data.<br>• Quantify the ideas (not overshadowed by mathematics) about the behavior of molecules and systems in order to be able to cope with experimental testing.<br>• Distinguish the usefulness of mathematics in Physical Chemistry and to be inspired by the charm of their application.<br>• Thinks and reflects in the language of science avoiding the simple memorization of knowledge. |
| | | | **Inorganic Chemistry** | • Student can draw molecular orbital diagram,<br>• Learn about basic concept of coordination chemistry, BMO,ABMO orbitals splitting of d orbitals ,<br>• Know about crystalline structure, |

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| | | | • Know about homogeneous and heterogeneous catalysis |
| | | **Organic Chemistry** | |
| | | **Analytical Chemistry** | • Upon completion of a degree<br>• acquire the Principles of Qualitative and Quantitative analysis w.r.t. Gravimetric , Thermal and Electrogravimetric analysis in detail.<br>• Principles of Quantitative Analysis ( Spectrophotometry - Colorimeter, spectrophotometer, AAS, FES and Polarography ) with instrumentation, role of each part, types of instruments and its applications.<br>• Principles of separation Techniques like solvent extraction. |
| | | **CH-335: Industrial Chemistry** | • Understanding of industrial processes and various chemical manufacturing processes of food , cement ,starch ,glass , polymer, sugar and fermentation, soap, detergents and cosmetics, dyes and paints, pharmaceutical industries.<br>• Importance of chemical industry, Various insecticides, Various insecticides,<br>• Composition of petroleum, resources, processing of petroleum Fuels and eco-friendly fuels. |
| | | **(CH-336D) Environ-mental Chemistry**<br>**(CH-346D)** | • Principles of green chemistry, Advantages of green chemistry, Methods of water purification, Waste water treatment process, Techniques used to monitor hazardous materials present in environment. |
| | | **Practical** | |
| | **Physics** | **Sr No** **Subject** | **Course Outcome** |
| | | **1)** Oscillation, Waves and Sound | **1)** Understand the physics and mathematics of oscillation.<br>**2)** Solve the equations of motion for simple harmonic, damped and forced oscillators. |

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| | | | **3)** Describe oscillatory motions with graphs and equations and use these descriptions to solve problems of oscillatory motion.<br>**4)** Explain oscillatory in terms of energy exchange with various examples.<br>**5)** Understand the mathematical description of travelling and standing wave.<br>**6)** Recognize one-dimensional classical wave equation and solutions to it.<br>**7)** Calculate the phase velocity of travelling wave.<br>**8)** Explain the Doppler Effect and predict in qualitative terms the frequency change that will occur for a stationary and moving observer.<br>**9)** Define the decibel scale qualitatively and give examples of sound at various levels. |
| | | **2)** Optics | 1) Acquire the basic concepts of wave optics.<br>2) Describe how light can constructively and destructively interfere.<br>3) Explain why a light beam spreads out after passing through an aperture.<br>4) Summarize the polarization characteristics of electromagnetic waves.<br>5) Understand optical phenomenon such as polarization, birefringence, interference and diffraction in terms of the wave model.<br>6) Be familiar with range of equipment used in modern optics. |
| | **Mathe-matics** | | **1)** Give the students a sufficient knowledge of fundamental principles, methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling, solving and interpreting.<br>**2)** Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.<br>**3)** Enhancing students' overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.<br>**4)** Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study. |
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<td>Statistics</td>
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<tr><th>Sr. No.</th><th>Subject</th><th>Course Outcome</th></tr>
<tr><td>1)</td><td>Descriptive Statistics</td><td>1) Collect, tabulate and analyze the simple data.<br>2) Calculate different measures of central tendency, dispersion, skewness and kurtosis.<br>3) Compute the correlation coefficient for bi-variate data and also fit linear or non-linear regression model to the data.</td></tr>
<tr><td>2)</td><td>Discrete Probability Distributions</td><td>1) Understand the concept of random and non-random experiments.<br>2) Compute probability and conditional proba-bility of an event.<br>3) Understand the concept of random variable and probability distribution.<br>4) Apply some standard discrete probability distributions to different real life situations.</td></tr>
<tr><td>3)</td><td>Practical</td><td>1) Present the statistical data in diagrammatic & graphical form using MS-Excel and interpret the result.<br>2) Calculate different measures of central tendency, dispersion, skewness and kurtosis and interpret the result.<br>3) Fit binomial, Poisson distributions and linear, non- linear regression models to the data and interpret the result.<br>4) Apply statistical techniques to real life data</td></tr>
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<td>Zoology</td>
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<tr><th>Sr. No</th><th>Course Outcome</th></tr>
<tr><td>1)</td><td>The practical courses provide opportunities for practical work practical skills in laboratory-based and field zoology and experiential learning in aspects of Applied Zoology.</td></tr>
<tr><td>2)</td><td>The specific learning goals for General Zoology are to provide students with a working knowledge of fundamental principles in zoology that will provide a foundation for their later advanced course work in more specific biological subjects.</td></tr>
<tr><td>3)</td><td>As General Zoology is a basic course, students will become familiar with animal classification schemes and associated taxonomic group diagnostic characteristics as well as developing an understanding of and ability to apply basic zoological principles.</td></tr>
<tr><td>4)</td><td>The laboratory and lecture sections of the course are highly integrated and directed toward teaching students the principles</td></tr>
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| | | of animal evolution, classification, form and function.<br>**5)** It promotes students' ability to critically think about, assess and evaluate data gathered both in the field and through scientific literature. |
| | **BCA (science)** | **Sr. No** — **Course Outcome**<br>**1)** Get familiar with basics of Programming like Android and Cloud Computing.<br>**2)** Understanding of programming languages like C,C++,PHP, Java.<br>**3)** To understand the importance of web and internet using android and different software's.<br>**4)** Different bridge courses and short term courses help students to get good jobs in software industries. |
| **B.Com** | **BBA(CA)** | **Sr. No** — **Course Outcome**<br>**1)** To know and understand concept of internet programming.<br>**2)** To understand the concepts of XML and Ajax.<br>**3)** To know the concept of Java programming.<br>**4)** To introduce upcoming trends in Information Technology.<br>**5)** To study eco-friendly software development<br>**6)** To know the concept of software testing.<br>**7)** To understand how to test bugs in software<br>**8)** To develop programming logic. |
| **M.Sc.** | | **Sr. No** — **Name of the Subject** — **Course Outcome**<br>**1)** Organic reaction Chemistry (CHO- 350) — Understand the Mechanism of the reaction and application.<br>**2)** Heterocyclic chemistry photochemistry and pericyclic chemistry (CHO-353) — Understand the use of heterocyclic, pericyclic & photochemistry reaction and application of reaction in recent synthesis.<br>**3)** Organic stereo chemistry (CHO-352) — Logical reasoning as well as thinking should be enhanced in students<br>• Students should be able to find out reaction products of organic reactions with proper stereo chemistry. |

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<tr><td></td><td></td><td>• Students should be able to understand the proper stereochemistry of cyclic compounds.</td></tr>
<tr><td>B.A.</td><td>Marathi</td><td>
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<tr><th>Sr. No.</th><th>Subject</th><th>Course Outcome</th></tr>
<tr><td>1)</td><td>भाषाविज्ञान- वर्णनात्मक आणि ऐतिहासिक</td><td>१) भाषेचे स्वरूप व कार्य, भाषेच्या अभ्यासाचे महत्त्व, भाषेच्या अभ्यासाची प्रमुख अंगे जाणून घेणे.<br>२) भाषा म्हणजे काय व तिचे मानवी जीवनातील कार्य व महत्त्व जाणून घेणे.<br>३) वेगवेगळ्या भाषाअभ्यासपद्धतींचे वेगळेपण व महत्त्व जाणून घेणे.<br>४) स्वननिर्मितीची प्रक्रिया समजावून घेणे.<br>५) वागिंद्रियांची रचना व कार्ये समजावून घेणे.<br>६) स्वनविज्ञान, स्वनिम संकल्पना आणि मराठीची स्वनिम व्यवस्था जाणून घेणे.<br>७) मराठीची रूपिमव्यवस्था समजावून घेणे.<br>८) वाक्यविन्यास व अर्थविन्यास या भाषावैज्ञानिक संकल्पनांचा मराठीच्या संदर्भात स्थूल परिचय.<br>९) ऐतिहासिक भाषाभ्यासपद्धतीचे स्वरूप व महत्त्व लक्षात घेणे.<br>१०) भाषाकुलाची संकल्पना जाणून घेवून मराठी भाषेच्या उत्पत्तीचा अभ्यास करणे.<br>११) मराठी भाषेचा उत्पत्तीकाळ जाणून घेवून तत्कालीन भाषिक स्थित्यंतरांचा आढावा घेणे.<br>१२) टप्याटप्याने भाषा म्हणून मराठीच्या वाटचालीचा ऐतिहासिक आढावा घेणे.</td></tr>
<tr><td>2)</td><td>साहित्यविचार</td><td></td></tr>
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| | | | | १) साहित्याचे स्वरूप समजावून घेणे.<br>२) साहित्याची प्रयोजने समजावून घेणे.<br>३) साहित्यनिर्मितीची प्रक्रिया समजावून घेणे.<br>४) साहित्याची भाषा समजावून घेणे.<br>५) साहित्याची आस्वाद प्रक्रिया समजावून घेणे.<br>६) साहित्यिक अभिरुची समजावून घेणे.<br>७) साहित्य आणि समाज यातील परस्परसंबंध समजावून घेणे.<br>८) साहित्यप्रकाराची संकल्पना समजावून घेणे.<br>९) वाङ्मयीन मूल्ये समजावून घेणे |

**Hindi**

| Sr. No. | Subject | Course Outcome |
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| 1) | हिंदी साहित्य का इतिहास | 1. हिंदी साहित्य के इतिहास की लेखन परंपरा से अवगत कराना।<br>2. हिंदी साहित्य के इतिहास के कालखंडों के नामकरण एवं पृष्ठभूमि का परिचय देना।<br>3. हिंदी साहित्य की प्रतिनिधि रचनाओं और रचनाकारों का महत्व, प्रदेय, पूर्ववर्ती तथा परवर्ती प्रभाव विशद करना।<br>4. हिंदी साहित्य के विकासक्रम तथा साहित्य के परिवर्तनों के कारणों का परिचय देना।<br>5. हिंदी साहित्य के इतिहास के माध्यम से साहित्य और युग जीवन का संबंध विशद करना।<br>6. आधुनिक युग की सामाजिक, राजनीतिक, धार्मिक, साहित्यिक तथा आर्थिक परिस्थितियों के बदलाव के परिपेक्ष्य में हिंदी साहित्य में आए हुए बदलाव से छात्रों को अवगत कराना। |
| 2) | काव्यशास्त्र | |

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<tr><td></td><td></td><td>1. छात्रों को काव्य, साहित्य की परिभाषाओं द्वारा काव्य के स्वरूप के साथ काव्य हेतु तथा काव्य के प्रयोजनों का ज्ञान कराना।<br>2. छात्रों को काव्य के तत्व, काव्य के भेद तथा शब्दशक्ति का ज्ञान कराना।<br>3. छात्रों को अलंकार, छंदों के स्वरूप के साथ उनका सोदाहरण परिचय कराना।<br>4. छात्रों को गद्य-भेदों के साथ नाटक, एकांकी और निबंध के स्वरूप एवं तत्वों की जानकारी देना।<br>5. छात्रों को रस का स्वरूप, रस के अंगों एवं भेदों का परिचय देना।<br>6. छात्रों को आलोचना का स्वरूप, आलोचना की उपयोगिता और आलोचक के गुणों से परिचित कराना।</td></tr>
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<tr><td></td><td>English</td><td>
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<tr><th>Sr. No.</th><th>Course Outcome</th></tr>
<tr><td>1)</td><td>To prepare the students to use English Language effectively.</td></tr>
<tr><td>2)</td><td>To build vocabulary and introduce them to current ideas and issues.</td></tr>
<tr><td>3)</td><td>To acquaint them with literature, grammar, and composition.</td></tr>
<tr><td>4)</td><td>To familiarize the students with different styles of writing.</td></tr>
<tr><td>5)</td><td>To help them acquire writing skills.</td></tr>
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<tr><td></td><td>History</td><td>
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<tr><th>Sr. No.</th><th>Subject</th><th>Course Outcome</th></tr>
<tr><td>1)</td><td>Special Paper3: Introduction to History</td><td>1) To orient students about how history is studied, written and understood.<br>2) To study the Various Views and approaches of Historiography.<br>3) To study the types of Indian Historiography.<br>4) To introduce students to the basics of research.<br>5) Learn how to use sources in their presentation.</td></tr>
<tr><td>2)</td><td>Special Paper 4: History of Asia in 20th century</td><td>1) To orient the students with political history of Asia.<br>2) To enable students to understand the economic transition in Asia during 20th Centuries.<br>3) To provide students with an overall view</td></tr>
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| | | and broad perspective different movements connected with Nationalist aspirations in the region of Asia in general.<br>**4)** To empower students to cope with the challenges of globalization. |
| | **Geography** | **Sr. No.** — **Course Outcome**<br>**1)** Understand the effect of rotation of revolution the Earth.<br>**2)** Know the internal structure of the earth know the importance of longitudes & latitudes International Date line and Standard time.<br>**3)** Understand interior structure of the earth.<br>**4)** Understand Theory regarding of Origin of Continents and oceans.<br>**5)** Study the formation of Rocks Understand the work of internal and external forces and.<br>**6)** Understand the history of population.<br>**7)** Understand the types of data.<br>**8)** Study of distribution and density of population.<br>**9)** Get knowledge of population theories. |
| | **Economics** | **Sr. No.** — **Course Outcome**<br>**1)** Get knowledge of demand and supply theories.<br>**2)** Understand the basic concept of related to economics.<br>**3)** Understand the international trade, public finance, Indian tax rules.<br>**4)** Get knowledge of GDP, NNP, PCI, and Import- Export.<br>**5)** Get knowledge of agriculture condition in country. |

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