

B.Sc(Eco) Bachelors in Science (Economics)

Program Outcomes

- To acquaint a student with knowledge about micro and macroeconomics.
- To provide thorough understanding of nature, scope and application of mathematics; and computer languages like C and Oracle.
- To develop interdisciplinary approach among the students.

Program Specific Outcomes

After the completion of the course, a student is able

- To pursue further studies to get specialization in Economics, Mathematics, Computers, business administration.
- To work as junior level managerial positions in banking industry or insurance companies as an office assistant, accounts executive in an organization.
- To build careers in the industrial, business organizations where sophisticated quantitative & computer skills and insight are required.

Course Objectives and Outcomes B.Sc(Eco) Sem-I

Subject: Economics (Micro Economics)

Periods per week: 6

Tutorials per week: 3

**Duration of period: 40
minutes**

Course Objectives

- To introduce the students to the nature and scope of micro economics.
- To have better understanding of consumer behaviour.
- To make students understand various market situations.
- To enable the students to understand the concept of distribution of factor payments.

Course Outcomes

- Knowledge about various economic concepts.
- Ability to think systematically about problems of business and wealth.
- Skill to use economics as a practical tool for decision making.

Subject: Computer Science (Computer Fundamental and PC Software)

Periods per week: 6

Practical per week: 4

Duration of period: 40 min

Course Objectives

- To introduce the students to the structure, functions and components of a computer system.
- To give complete knowledge of MS-Office applications.
- To understand the working of different components and devices.
- To impart detailed knowledge of various data storage devices.
- To give an in-depth understanding of role of computers in business, education and society.

Course Outcomes

- Ability to work with various I/O devices.
- Familiarization with MS-Windows operating system.
- Knowledge of MS-Word and MS-PowerPoint, MS excel.
- Development of skills viz. tabulate and graphically represent data, write business letters and sending e-mail, format a document, prepare PPTs, apply various formulas in excel sheets etc.

Subject: Quantitative Techniques-I

Periods per week: 6

Tutorials per week: 3

Duration of period: 40 minutes

Course Objectives

- To familiarize with the role of Statistics in Economics.
- To enable the students classify, tabulate and represent data graphically.
- To learn the use of various statistical techniques.
- To understand how to use the concept of index numbers.
- To impart knowledge regarding time series analysis.

Course Outcomes

- Practical Application of statistical techniques.
- Ability to analyze the trend of economic series.
- Knowledge of methods of collecting primary and secondary data.

Subject: Mathematics (Algebra)

Periods per week: 9

Practical's per week: 3

Duration of period: 40 minutes

Course Objectives

- To introduce the students to various types of equations such as linear, quadratic, cubic or biquadratic.
- To gain knowledge about the concept of matrices.
- To explain quadratic forms and conversions of quadratic forms in matrix and vice-versa.
- To understand that how many positive and negative roots of an equation can have.
- To learn about transformation of equations in another form.

Course Outcomes

- Ability to recognize and use absolute values.
- Skill to use system of equations to mathematical problems.
- Develop the habit of drawing conclusions based on quantitative information.
- Ability to use the concept of matrix.
- Ability to solve Addition, Multiplication, Row Rank, Column Rank using any software.

Subject: English Language Skills (Ability Enhancement Course)

Periods per week: 6

Duration of period: 40 minutes

Course Objectives

- To develop interest in appreciation of literature.
- To enable the students to communicate effectively and appropriately in real life situations.
- To develop the use of the four languages skills i.e. reading, listening, speaking and writing.
- To pronounce English correctly and intelligibly.
- To use appropriate word stress and sentence.
- To write paragraphs, letters, reports, diary entries etc.

Course Outcomes

- Development of critical thinking skills and creativity as well.
- Understanding of poetry, novels and plays as literary art forms.
- Broaden vocabularies.
- Ability to analyze various elements of poetry such as tone, genre imagery, symbolism, theme etc.
- Learn how to attend to Punctuation, Grammar and Spellings in their texts.

ਵਿਸ਼ਾ: ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ

ਸਮਾਂ: 40 ਮਿੰਟ

ਉਦੇਸ਼:

- ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਭਾਸ਼ਾ, ਸਾਹਿਤ, ਅਤੇ ਸਭਿਆਚਾਰ ਪ੍ਰਤੀ ਚੇਤਨਤਾ ਪੈਦਾ ਕਰਨਾ।
- ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਸਿਰਜਨਾਤਮਕ ਹੁਨਰ/ਕਲਾ ਨੂੰ ਉਤਸ਼ਾਹਿਤ ਕਰਨਾ।
- ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਅਧਿਐਨ ਦੁਆਰਾ ਵਿਦਿਆਰਥੀ ਦੀ ਸ਼ਖ਼ਸੀਅਤ ਨੂੰ ਉਸਾਰਨਾ।
- ਵਿਦਿਆਰਥੀ ਦੀ ਸਾਹਿਤਕ ਸਮਝ ਵਿਚ ਵਾਧਾ ਕਰਨਾ।
- ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੇ ਨਿਕਾਸ ਅਤੇ ਵਿਕਾਸ ਤੋਂ ਵਿਦਿਆਰਥੀ ਨੂੰ ਜਾਣੂ ਕਰਵਾਉਣਾ।

ਨਤੀਜੇ:

- ਵਿਦਿਆਰਥੀ ਭਾਸ਼ਾਈ ਅਧਿਐਨ ਰਾਹੀਂ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਚ ਮੁਹਾਰਤ ਹਾਸਿਲ ਕਰੇਗਾ।
- ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੇ ਨਿਕਾਸ ਅਤੇ ਵਿਕਾਸ ਨੂੰ ਸਮਝੇਗਾ।
- ਵਿਦਿਆਰਥੀ ਵਿਚ ਭਾਸ਼ਾਈ ਸੰਰਚਨਾ ਬਾਰੇ ਸਮਝ ਵਧੇਗੀ।
- ਵਿਦਿਆਰਥੀ ਵਿਚ ਸਾਹਿਤਕ ਰਚਨਾਵਾਂ ਦਾ ਗਹਿਨ ਅਧਿਐਨ ਕਰਨ ਦੀ ਕਲਾ ਵਿਕਸਿਤ

ਹੋਵੇਗੀ।

- ਵਿਦਿਆਰਥੀ ਸਾਹਿਤ ਦੀਆਂ ਗਲਪੀ ਵਿਧਾਵਾਂ ਰਾਹੀਂ ਸਮਾਜਕ ਤੇ ਸਭਿਆਚਾਰਕ ਪ੍ਰਸੰਗ ਨੂੰ ਉਭਾਰਨਾ ਸਿਖੇਗਾ।

B.Sc.(Eco) Sem-III

Subject: Economics (Indian Economy)

Periods per week: 6

Duration of period: 40 minutes

Course Objectives

- To enable the students to understand the nature of Indian economy.
- To familiarize with the importance and various policies of agriculture and industrial development in India.
- To impart knowledge regarding various economic problems prevailing in the Indian economy and solutions to curb them.
- To study the objectives and strategies of economic planning in India.
- To understand the role of foreign trade, balance of payment, foreign capital and MNCs in India.

Course Outcomes

- Awareness regarding economic problems prevailing in present scenario of Indian economy.
- Understanding of various Government policies in different sectors of Indian economy.
- Knowledge of priorities and targets of economic plans.
- Ability to suggest solutions for the economic problems in context to Indian economy.

Subject: Computer Science (Computer Oriented Numerical and Statistical Methods)

Periods per week: 8

Practical per week: 4

Duration of period: 40minutes

Course Objectives

- To learn how to perform error analysis for arithmetic operations.
- To demonstrate working of various numerical methods.
- To provide a basic understanding of the derivation and use of methods of interpolation and numerical integration.
- To impart knowledge of various statistical techniques.
- To develop students' understanding through laboratory activities to solve problems related to above stated concepts.

Course Outcomes

- Skill to choose and apply appropriate numerical methods to obtain approximate solutions to difficult mathematical problems.
- Ability to apply various Statistical techniques such as Measures of Central Tendency and Dispersion.
- Understanding of relationship between variables using the method of Correlation and Trend Fit Analysis.

Subject: Quantitative Techniques-III**Periods per week: 6****Tutorial per week: 3****Duration of each period: 40 minutes****Course Objectives**

- To impart knowledge of various mathematical concepts.
- To enable students to use mathematical concept in economics for solving problems.
- To enable students to understand that Mathematics and Economics are inter related.

Course Outcomes

- Ability to use the concept of maxima and minimum and partial derivatives in economics.
- Apply concept of integration for solving problems.
- Knowledge about the applications of matrices.
- Understanding of linear programming and its applications.
- Skill to apply input–output models in Economics.

Subject: Mathematics–Paper-I (Analysis)**Periods per week: 6****Tutorial per week: 3****Duration of period: 40 minutes****Course Objectives**

- To enable students to use Sequences and Series.
- To familiarize with Riemann and Improper Integrals.
- To gain knowledge about Beta and Gamma functions.

Course Outcomes

- Use the definition of convergence to test an integral.
- Describe the real line as a complete ordered field.
- Apply the Fundamental theorem of Calculus to deal with problems of Real Analysis.
- Skill to solve different mathematical problems.

Subject: Mathematics – Paper-II (Analytical Geometry)**Periods per week: 6****Tutorials per week: 3****Duration of period: 40 minutes****Course Objectives**

- To enable students to solve the pair of straight line.
- To understand the effects on a point when the origin gets shifted.
- To familiarize the students with the concept of rotation of axes and intersection of three plane.
- To understand the difference between 2D and 3D figures.

Course Outcomes

- Ability to differentiate between ball and simple circular disc.
- Knowledge of various geometrical figures such as circle, ellipse, hyperbola, sphere.
- Understand that intersection of sphere and plane is always a circle.

Subject: English (Compulsory)
Periods per week: 6
Duration of period: 40 minutes

Course Objectives

- To develop interest in appreciation of literature.
- To enable the students to communicate effectively and appropriately in real life situations.
- To develop the use of the four languages skills i.e. reading, listening, speaking and writing.
- To pronounce English correctly and intelligibly.
- To use appropriate word stress and sentence.
- To write paragraphs, letters, reports, diary entries etc.

Course Outcomes

- Development of critical thinking skills and creativity as well.
- Understanding of poetry, novels and plays as literary art forms.
- Broaden vocabularies.
- Ability to analyze various elements of poetry such as tone, genre imagery, symbolism, theme etc.
- Learn how to attend to Punctuation, Grammar and Spellings in their texts.

ਵਿਸ਼ਾ: ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ

ਸਮਾਂ: 40 ਮਿੰਟ

ਉਦੇਸ਼:

- ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਭਾਸ਼ਾ, ਸਾਹਿਤ, ਅਤੇ ਸਭਿਆਚਾਰ ਪ੍ਰਤੀ ਚੇਤਨਤਾ ਪੈਦਾ ਕਰਨਾ।
- ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਸਿਰਜਨਾਤਮਕ ਹੁਨਰ/ਕਲਾ ਨੂੰ ਉਤਸ਼ਾਹਿਤ ਕਰਨਾ।
- ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਅਧਿਐਨ ਦੁਆਰਾ ਵਿਦਿਆਰਥੀ ਦੀ ਸ਼ਖ਼ਸੀਅਤ ਨੂੰ ਉਸਾਰਨਾ।
- ਵਿਦਿਆਰਥੀ ਦੀ ਸਾਹਿਤਕ ਸਮਝ ਵਿਚ ਵਾਧਾ ਕਰਨਾ।
- ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੇ ਨਿਕਾਸ ਅਤੇ ਵਿਕਾਸ ਤੋਂ ਵਿਦਿਆਰਥੀ ਨੂੰ ਜਾਣੂ ਕਰਵਾਉਣਾ।

ਨਤੀਜੇ:

- ਵਿਦਿਆਰਥੀ ਭਾਸ਼ਾਈ ਅਧਿਐਨ ਰਾਹੀਂ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਚ ਮੁਹਾਰਤ ਹਾਸਿਲ ਕਰੇਗਾ।
- ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੇ ਨਿਕਾਸ ਅਤੇ ਵਿਕਾਸ ਨੂੰ ਸਮਝੇਗਾ।
- ਵਿਦਿਆਰਥੀ ਵਿਚ ਭਾਸ਼ਾਈ ਸੰਰਚਨਾ ਬਾਰੇ ਸਮਝ ਵਧੇਗੀ।
- ਵਿਦਿਆਰਥੀ ਵਿਚ ਸਾਹਿਤਕ ਰਚਨਾਵਾਂ ਦਾ ਗਹਿਨ ਅਧਿਐਨ ਕਰਨ ਦੀ ਕਲਾ ਵਿਕਸਿਤ

ਹੋਵੇਗੀ।

- ਵਿਦਿਆਰਥੀ ਸਾਹਿਤ ਦੀਆਂ ਗਲਪੀ ਵਿਧਾਵਾਂ ਰਾਹੀਂ ਸਮਾਜਕ ਤੇ ਸਭਿਆਚਾਰਕ ਪ੍ਰਸੰਗ ਨੂੰ ਉਭਾਰਨਾ ਸਿਖੇਗਾ।

B.Sc.(Eco) Sem-V

Subject: Economics (Economics of Development)

Periods per week: 6

Duration of period: 40 minutes

Course Objectives

- To make students aware about nature of economy.
- To learn about various growth models.
- To enable students understand export promotion and import substitution strategies.

Course Outcomes

- Understanding of various exports promotion and import substitution measures.
- Knowledge about economic growth and economic development.

Subject: Computer Science (Database Management System and Oracle)

Periods per week-8

Practical per week: 4

Duration of period: 40 minutes

Course Objectives

- To introduce the students to the database system.
- To learn how to design a database using different models.
- To enable the students to understand the database handling during execution of the transactions.
- To gain complete knowledge of SQL and PL/SQL.

Course Outcomes

- Familiarization with Database Management System and its various forms viz. RDBMS.
- Comprehensive knowledge of database models- Hierarchical, Network and ER model.
- Ability to code database transactions using SQL.
- Skill to write PL/SQL queries, sub queries and queries using joinig.
- Understand database design applying normalization.

Subject: Mathematics – Paper-I (Dynamics)

Periods per week: 6

Duration of period: 40 minutes

Course Objectives

- To enable the students to understand and use the basics of dynamics.
- To introduce students to Newton's Law of Motion.
- To familiarize with conical pendulum, simple pendulum and free oscillation.

Course Outcomes

- Familiarization with Swinging of clock.
- Ability to explain Newton's Law.
- Knowledge of escape velocity.
- Learn how to deal with Atwood's machine.
- Understanding of how the value of gravity changes outside the earth.

Subject: Mathematics –Paper-II (Number Theory)

Periods per week: 6

Tutorial per week: 3

Duration of period: 40 minutes

Course Objectives

- To enable the students to understand basic structures and properties of integers.
- To familiarize with Division Algorithm and Euclidean Algorithm.
- To impart knowledge regarding the use of concept of prime factorization.
- To understand and use Condition of Congruence.
- To familiarize with Euler phi and arithmetic functions.

Course Outcomes

- Ability to improve mathematical thinking.
- Ability to solve mathematical problems.

Subject: Quantitative Techniques-V

Periods per week: 6

Duration of period: 40 minutes

Course Objectives

- To enable the students to understand nature of sampling distributions.
- To impart knowledge regarding the different statistical techniques to obtain estimators of different probability distributions.
- To enable the students to understand the knowledge of parametric and non-parametric tests.

Course Outcomes

- Develop logical reasoning.
- Ability to apply parametric and non-parametric tests for interpreting data.
- Ability to apply statistical techniques to obtain estimators of different probability distributions.

Subject: English (Compulsory)

Periods per week: 6

Duration of period: 40 minutes

Course Objectives

- To develop interest in appreciation of literature.
- To enable the students to communicate effectively and appropriately in real life situations.
- To develop the use of the four languages skills i.e. reading, listening, speaking and writing.
- To pronounce English correctly and intelligibly.
- To use appropriate word stress and sentence.
- To write paragraphs, letters, reports, diary entries etc.

Course Outcomes

- Development of critical thinking skills and creativity as well.
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ਵਿਸ਼ਾ: ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ

ਸਮਾਂ: 40 ਮਿੰਟ

ਉਦੇਸ਼:

- ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਭਾਸ਼ਾ, ਸਾਹਿਤ, ਅਤੇ ਸਭਿਆਚਾਰ ਪ੍ਰਤੀ ਚੇਤਨਤਾ ਪੈਦਾ ਕਰਨਾ।
- ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਸਿਰਜਨਾਤਮਕ ਹੁਨਰ/ਕਲਾ ਨੂੰ ਉਤਸ਼ਾਹਿਤ ਕਰਨਾ।
- ਪੰਜਾਬੀ ਸਾਹਿਤ ਦੇ ਅਧਿਐਨ ਦੁਆਰਾ ਵਿਦਿਆਰਥੀ ਦੀ ਸ਼ਖ਼ਸੀਅਤ ਨੂੰ ਉਸਾਰਨਾ।
- ਵਿਦਿਆਰਥੀ ਦੀ ਸਾਹਿਤਕ ਸਮਝ ਵਿਚ ਵਾਧਾ ਕਰਨਾ।
- ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੇ ਨਿਕਾਸ ਅਤੇ ਵਿਕਾਸ ਤੋਂ ਵਿਦਿਆਰਥੀ ਨੂੰ ਜਾਣੂ ਕਰਵਾਉਣਾ।

ਨਤੀਜੇ:

- ਵਿਦਿਆਰਥੀ ਭਾਸ਼ਾਈ ਅਧਿਐਨ ਰਾਹੀਂ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਚ ਮੁਹਾਰਤ ਹਾਸਿਲ ਕਰੇਗਾ।
- ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੇ ਨਿਕਾਸ ਅਤੇ ਵਿਕਾਸ ਨੂੰ ਸਮਝੇਗਾ।
- ਵਿਦਿਆਰਥੀ ਵਿਚ ਭਾਸ਼ਾਈ ਸੰਰਚਨਾ ਬਾਰੇ ਸਮਝ ਵਧੇਗੀ।
- ਵਿਦਿਆਰਥੀ ਵਿਚ ਸਾਹਿਤਕ ਰਚਨਾਵਾਂ ਦਾ ਗਹਿਨ ਅਧਿਐਨ ਕਰਨ ਦੀ ਕਲਾ ਵਿਕਸਿਤ

ਹੋਵੇਗੀ।

- ਵਿਦਿਆਰਥੀ ਸਾਹਿਤ ਦੀਆਂ ਗਲਪੀ ਵਿਧਾਵਾਂ ਰਾਹੀਂ ਸਮਾਜਕ ਤੇ ਸਭਿਆਚਾਰਕ ਪ੍ਰਸੰਗ ਨੂੰ ਉਭਾਰਨਾ ਸਿਖੇਗਾ।

Subject: Drug Abuse

Periods per week: 6

Duration of period: 40 minutes

Course Objectives

- To create awareness among students regarding ill effects of drug abuse.
- To make them aware about the risk factors responsible of drug abuse.
- To get them prepared for eradicating this evil from society.
- To encourage them to spread awareness regarding problems of drug abuse and its treatment among society.

Course Outcomes

- Understand the concept of use, misuse, abuse, dependence, withdrawal and addiction.
- Understand physical, psychological, social and economical effects of drug abuse.
- Analyze how alcohol and other drugs result in family dysfunction.

Subject: Environmental studies

Periods per week: 6

Duration of period: 40 Minutes

Course Objectives

- To create awareness about environmental issues.
- To nurture the curiosity of students particularly in relation to natural environment.
- To develop an attitude among students to actively participate in all the activities regarding environment protection.
- To develop skills for identifying and solving environmental problems.

Course Outcomes

- Critical thinking in relation to environmental affairs.
- Understanding about interdisciplinary nature of environmental issues.
- Independent research regarding environmental problems in form of project report.