

Programme Matrix: Bachelor of Science- Mathematics, Statistics, Economics [2019 Batch]



Kristu Jayanti College

AUTONOMOUS Bengaluru

Reaccredited 'A' Grade by NAAC | Affiliated to Bengaluru North University

FACULTY OF SCIENCE

B.Sc. Mathematics, Statistics, Economics

Programme Educational Objectives

PEO1: To empower the students with mathematical concepts and tools.

PEO2: To equip the students with knowledge and skills in statistical analysis and inferences.

PEO3: To provide the theoretical and practical propositions in micro and macro-economics

PEO4: To nurture the students with employability skills and professional ethics.

Programme Outcome

After successful completion of three year B.Sc. MSE Programme, the graduate will be able to:

PO1: Apply professional and social skills to cater to the needs of the industry, society and global scientific community.

Programme Specific Outcomes

After successful completion of three year B.Sc. MSE Programme, the graduate will be able to:

PSO1: Appraise mathematical concepts and reasoning.

PSO2: Examine statistical data and draw logical inferences.

PSO3: Analyze national and global economic issues.

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I Semester

Course Type	Course Code	Course Title	Course Outcome
AECC	AEN103A11	Additional English I	<ol style="list-style-type: none"> 1. Describe and differentiate between ballads and sonnets 2. Analyze critically the writing style of prose writers 3. Develop interest to appreciate one act plays 4. Apply the rules of punctuation to write concisely 5. Demonstrate proficiency in creating leaflets and brochures
AECC	HIN103B11	Hindi I	<ul style="list-style-type: none"> ● हिन्दी साहित्य के गद्य विधाओं का विश्लेषण करने की क्षमता का विकास ● विद्यार्थियों में सामाजिक यथार्थ का मूल्यांकन करने का ज्ञान ● सृजनात्मक कौशल्य में परिपूर्णता ● गद्य विधाओं के अध्ययन करने के बाद सामाजिक मूल्यों का ज्ञान प्राप्त ● अनुवाद कला और भाषा में परिशुद्धता
AECC	KAN103B11	Kannada I	<ul style="list-style-type: none"> ● ಜಾನಪದ & ಶಿಷ್ಟ ಸಾಹಿತ್ಯದ ವ್ಯತ್ಯಾಸಗಳೇ ಮಾಡುವರು ● ಸಾಮಾಜಿಕ ಸಮಾನತೆ ಮತ್ತು ಜೀವನಮೌಲ್ಯಗಳ ಪುನರಾವಲೋಕನ ಮಾಡುವರು ● ಗ್ರಾಮೀಣ ಸಂಸ್ಕೃತಿಯನ್ನು ವಿವರಿಸುವರು ● ಕನ್ನಡ ಭಾಷಾಪ್ರೇಮವನ್ನು ಇತರೆ ಭಾಷೆಗಳೊಂದಿಗೆ ಹೋಲಿಕೆ ಮಾಡುವರು
AECC	ENG103A11	English I	<ol style="list-style-type: none"> 1. To attune young minds to concerns and issues which have a broad and wide scope of use and application to life. 2. To cut across the history of creative expression in focusing primarily on the core values that governs human lives.
DSCC	UMT204B11	Mathematics I [Calculus and Analytical Geometry]	<ol style="list-style-type: none"> 1. Construct nth derivative of $f(z)=uv$ using Leibnitz's Theorem. 2. Evaluate partial derivatives of algebraic and transcendental functions. 3. Evaluate integral using a reduction formula. 4. Use the equations of line, plane, sphere, cone and cylinder.
DSCC	STS203B11	Statistics I [Basic Statistics I]	<ol style="list-style-type: none"> 1. Distinguish nominal, ordinal, ratio and interval data types 2. Analyze univariate data using measures of central tendency, measures of dispersion, skewness and kurtosis 3. Analyze bivariate and trivariate data sets using correlation and regression 4. Apply addition, multiplication and conditional probability law
DSCL	STS2L1B11	Statistics Practical I	<ol style="list-style-type: none"> 1. Explain data structures, dynamic memory management and usage of pointer variables 2. Differentiate operations associated with arrays, linked lists, stacks, queues and trees 3. Design recursive procedures, sorting and searching algorithms for data structure applications
DSCC	ECO204A11	Economics I [Microeconomics]	<ol style="list-style-type: none"> 1. Apply the principles of utility theories in real life situations. 2. Examine the elasticities of demand and supply to make appropriate price decisions. 3. Analyze production theories to lead the firm in the optimum expansion path. 4. Interpret the price-output decisions of producers under different market situations. 5. Compare the scope of the factor market with the product market to determine the prices.

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II Semester

Course Type	Course Code	Course Title	Course Outcome
AECC	AEN103A21	Additional English II	<ol style="list-style-type: none"> To provide the young learners an introduction to new ideas and issues that bear relevance to our life today. To give the students an opportunity to develop values that will help them adapt to the changing world.
AECC	HIN103B21	Hindi II	<ul style="list-style-type: none"> काव्य अध्ययन में संगीतात्मक शैली को समझ लेता है काव्य विश्लेषण करने की क्षमता काव्य में निहित विचारों का मूल्यांकन काव्य सृजन करने का कौशल्य व्याकरणिक भाषा का ज्ञान एवं स्पष्टता
AECC	KAN103B21	Kannada II	<ul style="list-style-type: none"> ಕನ್ನಡ ಸಾಹಿತ್ಯದಲ್ಲಿನ ಭಾಷಾ ಮಡಿವಂತಿಕೆಯ ವಿವರಣೆ ತಿಳಿಯುವರು ಪುರಾಣ ಕಾವ್ಯಗಳಲ್ಲಿನ ಸಾಂಸ್ಕೃತಿಕ ಮುಖಾಮುಖಿಯ ವಿಶ್ಲೇಷಣೆ ಮಾಡುವರು ನಾಟಕಗಳಲ್ಲಿನ ಪರಿಸರ ವರ್ಣನೆಯ ಪುನರಾವಲೋಕನ ಕೈಗೊಳ್ಳುವರು ವೃತ್ತಿಧಾರಿತ ವ್ಯವಸ್ಥೆ ಬಗ್ಗೆ ಚರ್ಚಿಸುವರು
AECC	ENG103A21	English II	<ol style="list-style-type: none"> Discuss the use of animal imagery and hypersensitive characters in the twentieth century writings Describe poetic style and its devices in the English verses of the Victorian age Analyze poems and sonnets regarding existentialist and metaphysical themes Discover and implement new strategies of grammar in speaking English language Integrate the prominence of media and the elements of advertising by creating media awareness
AECC	NES102A01	Environmental Science	<ol style="list-style-type: none"> Discuss the overexploitation of natural resources. Appraise the components of the ecosystem. Assess the conservation of biodiversity. Criticize the mitigation process of natural disasters Survey the effects of pollution in the environment. Recommend the various policies for the betterment of the environment.
DSCC	UMT204B21	Mathematics II [Algebra and Differential Calculus]	<ol style="list-style-type: none"> Identify algebraic structures as groups Construct pedal equation, radius of curvature and evolute Explain singular point, asymptote and envelope Solve first order linear and homogeneous differential equations
DSCC	STS203B21	Statistics II [Basic Statistics II]	<ol style="list-style-type: none"> Relate to univariate and bivariate random variables in terms of p.m.f/ p.d.f , c.d.f and their properties Discriminate probability distributions as discrete -binomial, poisson, negative binomial, geometric, hyper geometric; and continuous- uniform, exponential, normal gamma, beta Apply the properties of expectation and variance of random variables

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			4. Interpret wlln and chebychev's inequality
DSCL	STS2L1B21	Statistics Practical II	<ol style="list-style-type: none"> 1. Calibrate univariate and bivariate random variables 2. Formulate discrete distributions- binomial, poisson, negative binomial, geometric, hyper geometric; and continuous distributions- uniform, exponential, normal 3. Demonstrate wlln and chebychev's inequality
DSCC	ECO204A21	Economics II[Macro Economics]	<ol style="list-style-type: none"> 1. Analyze the components of national income and circular flow of income model to understand the basic elements of Macro Economics. 2. Interpret the differences between Classical approach and Keynes approach. 3. Examine the Monetary theories and working pattern of banking institutions in the present scenario. 4. Estimate the effects of inflation and relate the phases of the business cycle with inflation. 5. Categorize the reasons of disequilibrium in the Balance of Payment and prioritize the measures to correct it.

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III Semester

Course Type	Course Code	Course Title	Course Outcome
AECC	AEN103A31	Additional English III	<ol style="list-style-type: none"> 1. Appreciate the theme of love and suspense in the works of Alfred Noyes, Robert Southey, Sir Arthur Conan Doyle and Shakespeare 2. Discover the sufferings of human being in the works of Tagore, Mary Fisher, Charley Chaplin, John Stainbeck and Philip Larkin 3. Analyses the dramatic techniques in the prescribed one act play 4. Outline the difference between essay writings and precis writing 5. Develop the interest on poem and prose
AECC	HIN103B31	Hindi III	<ul style="list-style-type: none"> • हिन्दी कविता और खण्डकाव्य के भेद को समझलेता है • पौराणिक कथा का विश्लेषण • पौराणिक आदर्श विचारों का अनुकरण करता है • आधुनिक और पौराणिक विचारों का मूल्यांकन • काव्य सृजन शैली का विकास
AECC	KAN103B31	Kannada III	<ul style="list-style-type: none"> • ಕನ್ನಡ ಸಾಹಿತ್ಯದ ವಿವಿಧ ಪ್ರಕಾರಗಳನ್ನು ಪರಿಚಯಿಸುತ್ತದೆ • ಮಧ್ಯಕಾಲೀನಯುಗದ ಭಕ್ತಿ ಪರಂಪರೆಯೊಂದಿಗೆ ಬದುಕಿನ ವಾಸ್ತವತೆಯನ್ನು ಹೋಲಿಸಿ ಚರ್ಚಿಸುವರು • ಭಾಷೆಯ ಕೌಶಲ್ಯಗಳೊಂದಿಗೆ ವಿಜ್ಞಾನ ಹಾಗೂ ತಾಂತ್ರಿಕ ಚಿಂತನೆಗಳನ್ನು ಗ್ರಹಿಸಲು ಅಗತ್ಯ ಕ್ರಮಗಳನ್ನು ಅರಿಯುವರು • ಯುವಜನಾಂಗವು ಅಭಿವೃದ್ಧಿಯ ಜಗತ್ತಿನಲ್ಲಿ ಹೊಂದಾಣಿಕೆಯಾಗಲು ಸಂವಹನ ಕೌಶಲ್ಯಗಳ ಅಗತ್ಯತೆಯನ್ನು ಚರ್ಚಿಸುವರು • ಧರ್ಮ ಮತ್ತು ಪರಂಪರೆಗಳ ಕುರಿತು ಪುನರಾವಲೋಕನ ಮಾಡುವರು
Compulsory Courses			
AECC	ENG103A31	English III	<ol style="list-style-type: none"> 1. State the problems of a man and the significance of parental affection in real life 2. Review the historical background of true events in roman history 3. Extrapolate the reflections on the lives of writers in literary genres 4. Interpret the significance of English literature in the forms of movies and serials in media 5. Formulate the structure of oral and written presentations and develop speaking skills

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DSCC	UMT204B31	Mathematics III [Algebra, Differential Calculus, Improper Integrals and Linear Programming]	<ol style="list-style-type: none"> 1. Explain cyclic group and Lagrange's theorem. 2. Evaluate limit of algebraic and transcendental function using L' Hospital's Rule. 3. Evaluate integral using beta and gamma functions. 4. Formulate a given simplified definition as a linear programming problem and solve using graphical or simplex methods.
DSCC	STS203A31	Statistics III [Statistical Inference I]	<ol style="list-style-type: none"> 1. Compare point estimators based on the properties of unbiasedness, consistency, efficiency and sufficiency 2. Construct confidence intervals for means, difference of mean, proportions, difference of proportions, variance, ratio of variances 3. Create random samples for uniform, Poisson, binomial and normal distributions
DSCL	STS2L1A31	Statistics Practical III	<ol style="list-style-type: none"> 1. Develop confidence intervals for means, difference of mean, proportions, difference of proportions, variance, ratio of variances 2. Construct random samples for uniform, Poisson, binomial and normal distributions
DSCC	ECO204A31	Economics III [Development Economics]	<ol style="list-style-type: none"> 1. Analyze the indicators of Economic development and examine the socio economic factors leading towards Economic development. 2. Compare the development theories with different economic systems. 3. Examine the significance of natural and human resources for the Economic development. 4. Interpret the connecting process of capital formation and Economic development. 5. Analyze the role of monetary and fiscal policies towards economic development.
SEC	SSP4L2A01	Soft Skills Practices	<ol style="list-style-type: none"> 1. Build verbal/oral communication, leadership and listening skills 2. Perform group discussion, presentations and personal interview

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IV Semester

Course Type	Course Code	Course Title	Course Outcome
AECC	AEN103A41	Additional English IV	<ol style="list-style-type: none"> 1. Interpret select poems of Robert Frost, Sarojini Naidu and William Blake 2. Explain the style and significant features of prose writings of R. K Narayan, Willa Cather, Doris Lessing, O. Henry, and Booker. T. Washington 3. Compare the ethical and cultural differences in Wole Soyinka's play 'The Lion and the Jewel' and learn the unique native culture of Nigeria 4. Assess the issues related to marriage, education, moral code of conduct, the concept of sublime, modernity, tradition, and the mindsets of human beings in life 5. Appraise the literary devices and techniques used in poetry and prose 6. Formulate grammatically correct sentences using proper punctuations 7. Create citations of books, articles and journals using MLA format 8th edition
AECC	HIN103B41	Hindi IV	<ul style="list-style-type: none"> ● हिन्दी व्यंग्य अध्ययन करने की शैली को समझलेता है ● व्यंग्य में निहित विचारों का विश्लेषण ● व्यंग्य कथाओं में अभिव्यक्त विचारों का मूल्यांकन ● निबंधों में निहित आदर्श विचारों का अनुकरण करता है ● व्यंग्य सृजन कौशल्य का विकास
AECC	KAN103B41	Kannada IV	<ul style="list-style-type: none"> ● ನಮ್ಮ ನಾಡು-ಸಮಾಜ-ಕುಟುಂಬ ಪರಂಪರೆಯಕುರಿತುಅರಿವು ಹಾಗೂ ಕಾಳಜಿಯನ್ನು ಅಧ್ಯಯನಮಾಡುವರು ● ಮಹಿಳಾ ಹಕ್ಕುಗಳು ಹಾಗೂ ರಕ್ಷಣೆಯಜವಾಬ್ದಾರಿಯನ್ನು ಸ್ಪಷ್ಟವಾಗಿ ತಿಳಿಯುವರು ● ಅರಣ್ಯ ಹಾಗೂ ನೈಸರ್ಗಿಕ ಸಂಪನ್ಮೂಲಗಳನ್ನು ವಿವಿಧ ವಿಷಯಗಳ ಅಧ್ಯಯನದೊಂದಿಗೆಚರ್ಚಿಸುವರು ● ಭಕ್ತಿಯಅರ್ಥ, ಗ್ರಹಿಕೆಗಳು, ವಿವಿಧ ನೆಲೆಗಳು ಕುರಿತುಕಾಲಘಟ್ಟದ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಹೋಲಿಸುವರು ● ಆದರ್ಶಗಳು, ಸಮಾಜಿಕ ಸೇವೆ ಈ ಕುರಿತು ಮೌಲ್ಯಧಾರಿತ ಬದುಕನ್ನುಕುರಿತು ಪುನರಾವಲೋಕನ ಮಾಡುವರು
Compulsory Courses			
AECC	ENG103A41	English IV	<ol style="list-style-type: none"> 1. Recognize, define, and identify poetic terms and genres 2. Examine novels analytically and interpretively, to identify literary, elements of plot, character, setting, tone, point of view, theme, style, symbol, metaphor, and image 3. Analyze the characters and themes of one act plays 4. Acquire vital employability skills and employment opportunities with in-depth knowledge of cv, cover letter, report writing and paragraph writing
DSCC	UMT204B41	Mathematics IV [Algebra, Differential Equations, Laplace Transforms and	<ol style="list-style-type: none"> 1. Analyze homomorphism and isomorphism of a group 2. Solve second and higher order differential equations

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		Fourier Series]	<ol style="list-style-type: none"> 3. Evaluate Laplace transforms and inverse Laplace transforms 4. Estimate Fourier series for even and odd functions
DSCC	STS203A41	Statistics IV [Statistical Inference II]	<ol style="list-style-type: none"> 1. Analyze type I error, type II error and power of test 2. Relate to test of significance for means, difference of mean, proportions, difference of proportions, variance, ratio of variances, correlation coefficients 3. Discriminate chi-square test for goodness of fit and independence of attributes 4. Apply non-parametric tests and Wald's sequential tests
DSCL	STS2L1A41	Statistics Practical IV	<ol style="list-style-type: none"> 1. Calibrate type I error, type II error and power of test 2. Design MP test for mean of normal distribution, parameters of binomial and Poisson distributions 3. Develop test of significance for means, difference of mean, proportions, difference of proportions, variance, ratio of variances, correlation coefficients 4. Formulate chi square test for goodness of fit and independence of attributes
DSCC	ECO204A42	Economics IV [Monetary Economics]	<ol style="list-style-type: none"> 1. Analyze the history of money and estimate its importance in maintaining economic stability. 2. Identifies the major determinants of demand & supply of money and measures its impact to decide the value of money. 3. Compare the monetary theories schools of economics to make effective monetary policy. 4. Evaluate the money market and capital market instruments and relate its impacts on the economy. 5. Evaluate India's monetary system and monetary policy and its effectiveness on economy.
NCCC	LSE5A2A41	Life Skills Education	<ol style="list-style-type: none"> 1. Develop self-competency and confidence in their day to day life 2. Evaluate the problems and find the sustainable solutions in their daily life 3. Enhance interpersonal relationship effectively in the community 4. Develop coping mechanisms to manage their stress effectively in their environment

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V Semester

Course Type	Course Code	Course Title	Course Outcome
DSCC	UMT204A51	Mathematics V [Real and Complex Analysis]	<ol style="list-style-type: none"> 1. Categorize sequences and series to convergent, divergent or oscillatory. 2. Construct analytic functions from complex functions. 3. Evaluate integrals using Cauchy's integral theorem and formula. 4. Compare circles and lines in z-plane and w-plane.
DSCC	UMT204A52	Mathematics VI [Total and Partial Differential Equations, Algebra and Numerical Analysis]	<ol style="list-style-type: none"> 1. Solve the partial differential equation of first order using Charpit's method and second order using complementary function and particular integral. 2. Identify rings, integral domain and field. 3. Apply numerical methods to perform interpolation and integration. 4. Solve algebraic and transcendental equations using bisection method, newton's method and secant method.
DSCL	UMT2L2B51	Mathematics Practical I	<ol style="list-style-type: none"> 1. Create programs for sequences and series using the Maxima tool. 2. Develop solutions for algebraic, transcendental and partial differential equations using the Maxima tool.
DSCC	STS203A51	Statistics V [Sampling theory and statistical quality control]	<ol style="list-style-type: none"> 1. Distinguish between probability and non-probability sampling techniques 2. Demonstrate the estimation of population mean for simple random, stratified and systematic samplings 3. Construct the confidence intervals for population mean and population proportion in simple random samplings 4. Differentiate the theoretical basis, background and utility of \bar{x}, r, s, σ, p, d, u and c control charts 5. Relate to single and double sampling plans by attribute
DSCL	STS2L2A51	Statistics Practical V	<ol style="list-style-type: none"> 1. Develop the confidence intervals for population mean and population proportion in simple random samplings 2. Manage stratified random sampling and systematic sampling 3. Design \bar{X}, r, s, σ, p, d, u and c control charts 4. Create single and double sampling plans by attribute
DSCC	STS203A52	Statistics VI [Design and analysis of experiments]	<ol style="list-style-type: none"> 1. Classify one-way and two-way ANOVA 2. Construct CRD, RBD and LSD 3. Relate to 2^2 and 2^3 factorial experiments 4. Analyze complete and partial confounding in a 2^3 factorial experiment with RBD layout
DSCL	STS2L2A52	Statistics Practical VI	<ol style="list-style-type: none"> 1. Calibrate one-way and two-way ANOVA 2. Formulate CRD, RBD and LSD 3. Develop 2^2 and 2^3 factorial experiments
DSCC	ECO204A51	Economics V [Indian Economy I]	<ol style="list-style-type: none"> 1. Evaluate the planning methods of Indian economy and examine its impacts on Economic growth. 2. Analyze the major challenges of Indian Economy and examine the causes and recommend relative solution. 3. Interpret the reason for low productivity in Indian agriculture sector and analyze the functions of

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			<p>agricultural financed institution in India.</p> <p>4. Examine the role of industries in Indian economic development and list out the features of different industrial policies of India.</p> <p>5. Recommend the significance of Infrastructure for Economic Development.</p>
DSCC	ECO204A52	Economics VI [International Economics]	<p>1. Interpret the theories of International trade and examine its application in real world.</p> <p>2. Analyze the Trade practices and understand the components of Terms of Trade.</p> <p>3. Interpret the determination of foreign exchange and find out the causes of disequilibrium in balance of payment and examine its Measures.</p> <p>4. Examine the working of economic integration and trade organization.</p> <p>5. Appraise the role of international economic institutions on economic development.</p>

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VI Semester

Course Type	Course Code	Course Title	Course Outcome
DSCC	UMT204A61	Mathematics VII[Vector Calculus and Integral Calculus]	<ol style="list-style-type: none"> 1. Use curl, divergence and gradient. Solve problems on line and multiple integrals. 2. Evaluate length, area and volume of curves using multiple integrals.
DSCC	UMT204A62	Mathematics VIII [Matrices, Linear Algebra and Calculus of Variations]	<ol style="list-style-type: none"> 1. Evaluate rank, inverse, Eigen values and Eigen vectors of a matrix and solve a system of linear equations. 2. Explain vector space, subspace, linear span, basis and dimension. 3. Interpret linear transformation and fundamental concepts of rank nullity theorem. 4. Evaluate the extreme value of a functional.
DSCL	UMT2L2B61	Mathematics Practical II	<ol style="list-style-type: none"> 1. Create programs for matrices and linear transformations using the Maxima tool. 2. Design Maxima programs to evaluate line and multiple integral.
DSCC	STS203A61	Statistics VII [Applied Statistics]	<ol style="list-style-type: none"> 1. Construct time series by method of moving averages, least square technique 2. Design seasonal indices by simple averages and ratio to moving averages 3. Develop price and quantitative index numbers, consumer price index number 4. Measure demography in terms of mortality rates, fertility rates, reproduction rates, life table 5. Categorize clinical trials in terms of observational, cross-sectional, prospective, retrospective and randomized control studies 6. Explain official statistics in terms of gnp, gdp, nnp, ndp, per capita income, real national income
DSCL	STS2L2A61	Statistics Practical I	<ol style="list-style-type: none"> 1. Calibrate linear and nonlinear trends; seasonal variation using simple averages and ratio to moving averages method 2. Create price and quantity index numbers, consumer price index number 3. Formulate mortality rates, fertility rates, reproduction rates, life table 4. Demonstrate odds ratio, relative risk, sensitivity, specificity, roc curve
DSCC	STS203A62	Statistics VIII[Operations research]	<ol style="list-style-type: none"> 1. Evaluate LPP using graphical, simplex and big M method 2. Illustrate TP using NWCR, MMM, VAM, MODI and AP using Hungarian method 3. Explain M/M/1 queuing theory in terms of arrival pattern, customer behaviour, queue discipline, service pattern 4. Interpret decision making under uncertainty and risk 5. Evaluate game theory using maximin-minimax principle, dominance rule, graphical method 6. Prepare project network using CPM and PERT
DSCL	STS2L2A62	Statistics Practical VIII	<ol style="list-style-type: none"> 1. Formulate LPP using graphical, simplex and big M method 2. Calibrate TP using NWCR, MMM, VAM, MODI and AP using Hungarian method 3. Design decision problem using EMV and EOL 4. Formulate game theory using maximin-minimax principle, dominance rule, graphical method 5. Create project network using CPM and PERT
DSCC	ECO204A61	Economics VII [Indian Economy II]	<ol style="list-style-type: none"> 1. Measure the performance of banking institutions in India.

Programme Matrix: Bachelor of Science- Mathematics, Statistics, Economics [2019 Batch]

			<ol style="list-style-type: none"> 2. Evaluate the Indian financial system and relate the performance of its instruments towards economic growth. 3. Examine the present currency system of India and explain the importance of Indian Monetary system. 4. Explain the structure of Indian Trade system and examine the features of Trade policy. 5. Measure the contribution of Karnataka Economy towards Indian economy growth.
DSCC	ECO204A62	Economics VIII [Public Economics]	<ol style="list-style-type: none"> 1. Compare the features of public and private finance of an economy. 2. Categorize the sources of public revenue and effects of taxation. 3. Identify the various reasons for growth of public expenditure and its effect and role in a developing economy. 4. Assess the burden and effect of public debt on economic growth. 5. Evaluate the nature of center-state financial relationship and recommendations of finance commission.