DSE Super20 November Batch Details

This online course beginning on 7th November, 2020 shall provide live and recorded lectures along with all necessary study material like notes, problem sets with solutions, solutions to past years etc. The entire DSE and ISI syllabus has been broken into 4 modules of Maths, Microeconomics, Macroeconomics and Stats-Econometrics.

Use the following links to install the mobile app of the coaching institute. You will get a 2-week free unlimited access to all content once you register on the app.

- 1. Install either our <u>android app</u> or <u>iOS app</u> (use Org Code "**BJLJZ**" on iOS), and register yourself providing your **Full Name**, primary contact number and Gmail ID.
- 2. After installing the app, you need to add batch code "isi20" and will be added to the batch within 24 hours post this.
- 3. The mobile app gives you access to all the live lectures, videos, class tests, study material etc.
- 4. You can access all content except live lectures on the browser as well. To login on the browser, follow the steps mentioned here.

Live Lectures:

One live lecture shall be held every Saturday and Sunday, for approx. 90 minutes each. There will be about 2 live doubt sessions each week, to discuss the doubts from the problem sets. The doubt sessions will normally be held on weekend evenings, but might be subject to shift to weekdays if it is a pareto improvement for the batch.

Video Lectures:

The lecture recordings from the live class will be made available online on the app and made accessible to the subscriber in an orderly manner which is intuitive to understand. Apart from full length recordings of the lectures, shorter videos of 10-15 minutes divided topic-wise will also be shared on the app.

Study Material:

The lack of a single book that focuses on the syllabus of entrance exams is one of the biggest impediments in the preparation. For this reason, we have made notes using the best reference available for each topic. The notes and problem sets will be uploaded in the study material section of the app

Past Year Discussion:

Questions from DSE and ISI from 2004 onwards shall be discussed right after a topic is completed. The combined solutions will be made available on the course folder for the reference of the students. The past years of JNU will be discussed after the completion of all the syllabus. The videos for the more difficult questions, and any other question that a subscriber of the course might have a doubt in, will be uploaded apart from the written solutions.

Mock Tests:

Each student of this course will be eligible for the test series. Our Test series shall begin in March and will comprise of at least 6 tests each on latest ISI and DSE pattern and shall be held every *To register for the course, kindly click here.*To send us a whatsapp message click here.

alternate weekend. The tests will be uploaded on an online platform where the student can give the exam in a real exam like setting. The result and solutions will be ready right after the test is completed. To know details about the mock test series, <u>click here</u>.

Our Methodology:

We believe in spending time learning and not making notes. For this reason, we provide complete notes for each topic. Moreover, we are always willing to arrange a video chat for any particular doubt. We have kept the needs of the student in mind when creating our model. We shall begin with +2 maths, which will help create a mathematical foundation for the economics and econometric courses.

Practice Problems:

At DSE Super20, we lay equal focus on teaching and problem solving. The way to clear the exam is to develop both, a foundation of in-depth knowledge and understanding, along with the techniques to solve the problems. For this reason, we will be providing more than enough problems to solve. By means of *problem sets*, *class tests*, *past years*, *text book problems and mock tests*, we shall be solving over 5000 questions in all during the entire course. The written/typed solutions for most of these will be provided to the students, however the more difficult and important ones shall be tackled using videos.

Timeline:

October 31	May end	April	May mid	June 2021
Lectures begin.	Lectures end	ISI Mock tests	DSE mock tests.	Mock tests end

Fee Structure:

The fee for the entire Course is 20,000, which can be paid in two instalments of 10k each, one within 2 weeks of being added to the course on the app, and other within the next 2 months.

Alternatively, one could pay a single one-time fee of 18,000 and get a discount.

Faculty:

All topics will be handled by Mayank Mundhra

- Research Scholar, ISI
- MA Economics DSE, 2016
- B.Tech IIT-Bombay, 2013



Selections in 2017:

- 1. Shreya D Munshi (DSE & ISI)
- 2. Saurav Jaswal (DSE & ISI)
- 3. Vrinda Gupta (DSE)
- 4. Rakshit (DSE & ISI)
- 5. Palak Kohli (DSE)
- 6. Vivek Kumar (DSE)
- 7. Shreya Jain (IGIDR)
- 8. Rakshit (DSE & ISI)

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- 9. Harshit Shah (ISI)
- 10. Meghna Sinha (ISI)

Selections in ISI 2018:

- 1. Nishant Kumar
- 2. Jaspreet Singh
- 3. Prashant Kumar
- 4. Sakshi Agarwal
- 5. Rishabh Wadhwa
- 6. Ayush Yadav

Selections in DSE 2018:

- 1. Yashika Bansal
- 2. Jasleen Kaur
- 3. Divyanshu
- 4. Shivangi Goel
- 5. Nishant Kumar
- 6. Prashant Kumar
- 7. Rishabh Wadhwa

Syllabus

1. Maths

- a. <u>Real Analysis (RA):</u> Set Theory, Numbers, Sequences, Series, Topology of Real Numbers, Limits, Continuity, Differentiation, Integration, Limits and Continuity of 2 variable functions, 2 variable calculus, Multi Variable Optimization, Quasi Concavity-Quasi convexity
- **b.** <u>Linear Algebra (LA):</u> Linear Equations, Linear Programming, Gaussian Elimination, Matrix Algebra, Factorization, Vector Spaces and Subspaces, Linear Independence, Null Space-Column Space and Complete Solutions, Determinants, Linear Transformations.

2. Microeconomics:

- a. <u>Consumer Theory:</u> Preferences, Utility Functions, Indifference Curves, Marginal Rate of Substitution, Utility Maximization, Marshallian and Hicksian Demand functions, Indirect Utility Functions, Expenditure Functions, Revealed Preferences, Elasticity, complements and substitutes.
- b. <u>Producer Theory:</u> Production Function, Isoquants, Marginal Rate of Technical Substitution, Returns to Scale, Elasticity of Substitution, Cost Function, Short and Long Run, Marginal Revenue
- **c.** <u>Uncertainty:</u> Expected Utility, Intertemporal Choices, Consumption Smoothing, Risk Aversion
- **d.** <u>Game Theory:</u> Strategies and Payoffs, Prisoners' Dilemma, Battle of the Sexes, Mixed Strategies, Continuum of Actions, Sequential Games, Repeated Games, Auctions, Adverse Selection
- e. <u>Partial Equilibrium:</u> Market Demand, Short run Supply, Equilibrium, Efficiency and Welfare, Monopoly, Price Discrimination, Bertrand Model, Cournot Model, Tacit Collusion, Stackelberg Model, Hotelling Model.

f. General Equilibrium: Simple Exchange, Edgeworth box, Walras' Law, Equilibrium, All possible combinations of Perfect Substitutes, Convex, Perfect Compliments and Lexicographic preferences.

3. Macroeconomics:

- **a.** <u>IS-LM Model:</u> GDP, Goods Market, Financial Market, Open Market Operations, Quantity Theory of Money, IS Curve, LM Curve, Equilibrium in Goods Market, and effect of Fiscal and Monetary Policies, Liquidity Trap.
- **b.** <u>AS-AD Model:</u> Labour Market, AS Curve, AD Curve, Keynesian and Classical model, Short run to Medium run, Fiscal and Monetary policies, Inflation and Unemployment, Expectations Augmented Phillips' curve, Wage Indexation
- c. <u>International Economics:</u> Accounting in Open Economy, Balance of Payments, Forex Markets, Exchange Rates, Marshall Lerner Condition, Mundell-Fleming Model, Dornbusch Overshooting model, Comparative Advantage, Hecksher-Ohlin Model
- **d.** <u>Growth Model:</u> INADA Conditions, Capital Accumulation, Golden Rule, Population Growth, Balanced Growth, Technological Progress, Other variations of Solow growth model.
- e. International Trade: Ricardian model, Comparative advantage, Heckscher-Ohlin Model

4. Statistics:

- **a.** <u>Probability:</u> Permutations and Combinations, Conditional Probability, Independent Events, Bayes' Theorem and Conditional Probability
- **b.** Random Variable: Discrete and Continuous Distribution, Cumulative Distribution Functions, Bivariate, Marginal Distribution, Conditional Distribution, Multivariable Distribution
- **c.** <u>Expectation:</u> Expectation of a RV, Variance, Moments, Mean and Median, Covariance and Correlation, and Conditional Expectation.
- d. Special Distributions: Bernoulli and Binomial, Hypergeometric, Poisson, Normal
- **e.** <u>Estimation:</u> Law of Large numbers, Markov and Chebyshev Inequalities, Central Limit Theorem.

5. Econometrics:

- **a.** <u>Regression Analysis:</u> PRF and SRF, OLS estimation, Classical Model Assumptions, Properties of OLS, Goodness of Fit and R², Gauss-Markov Theorem, Normality Assumptions.
- **b.** <u>Hypothesis Testing:</u> Null and Alternative Hypothesis, Type I and Type II error, Power of a test, p-value, t-test, Interval Estimation, Confidence Interval, chi-squared test, Prediction.
- **c.** <u>Regression Extension:</u> Regression through Origin, Scaling, Standardization, Log-Linear models, Multi Variable Regression, Adjusted R², ANOVA,
- **d.** <u>Dummy Variables:</u> ANOVA Model, ANCOVA Model, Seasonal Analysis, Piecewise Linear Regression
- e. Relaxing the Assumptions: Multicollinearity, Heteroscedasticity, and Autocorrelation.

Maximum Lectures Required (90 mins each)

Maths: 20Micro: 20Macro: 15

Statistics & Econometrics: 15

To get the Math demo videos, kindly *click here*. To get the Micro demo videos, kindly *click here*.