

DSE Super20 December Batch Details

The batch will comprise of a maximum of 20 students only, given admission on a first-come-first-serve basis. We have kept a limited batch size so as to give personal attention to each students. The entire DSE and ISI syllabus has been broken into 4 modules of Maths, Microeconomics, Macroeconomics and Stats-Econometrics.

Classroom Lectures:

The lectures will commence on the **14th of December (Saturday), 2 pm** and conclude by the May 2020. Each module will have about 40 hours of teaching. The teaching will be complimented with problem sets and weekly class tests (after completing a significant amount of the syllabus). ***The first 2 lectures are Introductory (free).***

Printed Notes:

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 students will be provided with these notes in the lecture before a topic is taken up. This helps the student to come prepared for the lecture.

Class Timings:

A total of about 140 hours of lectures shall be imparted over 6 months. The lectures shall be held on weekends. There will be about 34 lectures of 4 hours each. The timing is flexible and can be changed as per the preference of the majority of the batch. Wednesdays have been earmarked for doubt classes and make-up lectures. In case of any holiday or if the student misses a lecture, a make-up lecture shall be held on the earliest available Wednesday. But the student needs to inform beforehand about missing a particular lecture in order to get the make-up.

Past Year Discussion:

We will discuss in depth the past 15-year papers of JNU, ISI and DSE (in that order). The solutions will also be made available to the students for any future reference.

Online Videos:

The videos for the lectures shall be made available to the students for review as per their convenience. Apart from lecture videos, video solutions to problem sets, past years and mock tests shall also be made available.

Mock Tests:

Each student of DSE Super20 classroom program will be eligible for the test series. Our Test series shall begin in March and will comprise of 7 tests each on latest ISI and DSE pattern and shall be held every alternate weekend. Students can come to our centre and give the test in an exam-like environment which would help the candidate to acclimatize with the process. In case one is busy or prefers it, the tests shall be mailed to them. Detailed solutions will be posted after the test and doubt sessions will be held as well.

Our Philosophy:

- Smaller batches for more personal attention
- Focus on conceptual understanding
- Providing printed notes for the entire syllabus
- Solving mock tests in exam-like setting

To register for the course, kindly [click here](#).

Our Methodology:

We believe in spending time learning and not making notes. For this reason, we provide printed notes before each lecture. Moreover, we are always available to revisit any topics or have make up lectures in case anyone could not attend the regular lecture due to any reason. 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, starting this batch, we are launching the **3000 Question Series**. By means of *problem sets, class tests, past years, text book problems and mock tests*, we shall be solving over 3000 questions in all during the entire course. The solutions for most of these will be provided to the students, however the more difficult and important ones shall be tackled in the classroom.

Timeline:

<i>Decemeber 14</i>	<i>May</i>	<i>Feb-March</i>	<i>April</i>	<i>May mid</i>	<i>June</i>
Lectures begin.	Lectures end	Past Years	ISI Mock tests	DSE mock tests.	Mock tests end

Fee Structure:

The fee structure will depend on the number of modules one chooses to enrol for. The modules are as follows:

1. Maths (Real Analysis and Linear Algebra)
2. Microeconomics
3. Macroeconomics
4. Statistics and Econometrics

The fees depending on number of modules is as follows:

Number of Modules	Only 1	Any 2	Any 3	All 4
Fees	12,500	22,500	30,000	35,000

We allow the student to attend a lecture each of Maths and Microeconomics before deciding on joining. Post this the student has to pay an installment of minimum 20,000. The rest of the fees has to be paid in a second installment by the time we finish half the syllabus.

In case a student enrolls for all the 4 modules and wishes to pay the fees in one installment, we would give a discount of Rs. 2,500.

Faculty:

Maths, Micro and Stats will be handled by [Mayank Mundhra](#)

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



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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)
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. **Real Analysis (RA):** 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. **Linear Algebra (LA):** 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. **Consumer Theory:** 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. **Producer Theory:** Production Function, Isoquants, Marginal Rate of Technical Substitution, Returns to Scale, Elasticity of Substitution, Cost Function, Short and Long Run, Marginal Revenue

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- c. **Uncertainty:** Expected Utility, Intertemporal Choices, Consumption Smoothing, Risk Aversion
 - d. **Game Theory:** Strategies and Payoffs, Prisoners' Dilemma, Battle of the Sexes, Mixed Strategies, Continuum of Actions, Sequential Games, Repeated Games, Auctions, Adverse Selection
 - e. **Partial Equilibrium:** 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. **IS-LM Model:** 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. **AS-AD Model:** 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. **International Economics:** Accounting in Open Economy, Balance of Payments, Forex Markets, Exchange Rates, Marshall Lerner Condition, Mundell-Fleming Model, Dornbusch Overshooting model, Comparative Advantage, Heckscher-Ohlin Model
 - d. **Growth Model:** 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. **Probability:** 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. **Expectation:** 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. **Estimation:** Law of Large numbers, Markov and Chebyshev Inequalities, Central Limit Theorem.
- 5. Econometrics:**
- a. **Regression Analysis:** PRF and SRF, OLS estimation, Classical Model Assumptions, Properties of OLS, Goodness of Fit and R^2 , Gauss-Markov Theorem, Normality Assumptions.
 - b. **Hypothesis Testing:** 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. **Regression Extension:** Regression through Origin, Scaling, Standardization, Log-Linear models, Multi Variable Regression, Adjusted R^2 , ANOVA,
 - d. **Dummy Variables:** Anova Model, ANCOVA Model, Seasonal Analysis, Piecewise Linear Regression
 - e. **Relaxing the Assumptions:** Multicollinearity, Heteroscedasticity, and Autocorrelation.

Tentative Number of Lectures Required

- Maths: 9 (7 for RA and 2 for LA)

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- Micro: 9
- Macro: 7
- Statistics & Econometrics: 9 (5+4)

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