



Madras School of Economics & Central University of Tamil Nadu



Admission to M.Sc. Programs (2011-12) in **(i) Economics** and **(ii) Financial Economics**

These courses are offered on full time basis at Madras School of Economics in collaboration with Central University of Tamil Nadu (CUTN), Thiruvavur.

Programmes

Madras School of Economics (MSE) invites applications for admission to 2-Year (4 Semesters) M.Sc. Programs in (i) Economics and (ii) Financial Economics offered in collaboration with CUTN, Thiruvavur. These courses are designed to develop well trained economists with a strong background in theory and quantitative techniques, and (ii) Financial Economists with strong training in quantitative Economics and Finance. The successful candidates will cater to the need of economists/financial analysts/analytics in the banking and education sectors, corporate firms and multi-lateral agencies.

Background

(i) M.Sc. Economics: This program is designed such that the students learn the basic theories and their applications in the first two semesters. In addition, the quantitative courses equip them with a good range of skills and tools for applied analysis. The third and fourth semesters provide the opportunity to opt for elective courses from number of choices including Industrial Organization, Environmental Economics, Financial Economics, International Economics, and Applied Econometrics. The students are required to do term-papers in most courses and undertake dissertation in the fourth semester, which emphasizes independent research.

(ii) M.Sc. Financial Economics: There has been an exponential increase in the demand for qualified financial economists. Qualified financial economists should have the ability to adequately capture stylized facts in financial markets through effective models, and the ability to estimate and evaluate the models. The M.Sc. Financial Economics program aims to develop such skills. The quantitative courses equip the students with a good range of skills and tools for applied analysis. The third and fourth semesters provide the

opportunity to opt for elective courses from number of choices including Risk Management, Investment Banking, Financial Market Microstructure, Fixed Income Securities, Economics of Insurance, and Empirical Methods in Finance. The students are required to do term-papers in most courses and undertake dissertation in the fourth semester, which emphasizes independent research.

The courses in both programs are analytical in nature involving application of mathematical, statistical, and econometric analyses. These programs provide a valuable opportunity for the students to enhance their computational skills by learning econometric applications using softwares such as EVIEWS, STATA, MATLAB etc.

Examination System

All courses will follow the evaluation rules as per M.A./M.Sc. rules and regulations of CUTN.

About Madras School of Economics

Madras School of Economics offers 2-Year M.Sc programmes in (i) Economics, (ii) Financial Economics, (iii) Actuarial Economics, (iv) Applied Quantitative Finance, and (v) Environmental Economics. The first two programs are offered in collaboration with the Central University of Tamil Nadu, Thiruvavur, while the rest of the three programs are offered in collaboration with IGNOU, New Delhi. The M.Sc courses are recognized as advanced courses by the academic circle and the market. Campus recruitment takes place in the second year by various leading businesses and other institutions. The main organizations that participated in the campus recruitment for the current batch include Citigroup Global Services, Fidelity Investments, HSBC, Mu Sigma, Hewlett Packard, IMAcS, Symphony Services, The Energy Resources Institute, Nidhyana Associates and Global Analytics.

MSE has highly qualified faculty, a well endowed library and a computer centre. MSE subscribes to Econlit and Sciencedirect and has access to more than seven hundred international journals in economics and finance. For further details, please visit the MSE website at www.mse.ac.in.

Eligibility

Any graduate of a recognized University with a minimum of 50% marks in aggregate with Economics / Statistics/ Mathematics as one of the subjects (papers) is eligible to apply for the programs.

Application and Basis of Selection

Admission will be based on common entrance test and counseling at designated centres in India. For application details refer to CUTN - Advt. in "The Hindu" dated 04.05.2011, and the following URLs www.tiruvavur.tn.nic.in/cutn / www.cucet.ac.in / www.mse.ac.in. The

filled-up applications along with appropriate Demand Draft drawn in favour of “Coordinator, CUCET-2011”, payable at Thiruvarur should be sent to “**Blueshift Information Systems Private Limited**” 6th Floor, East Wing, Sreyas Towers, 23 & 24, Chamiers Road, Chennai – 600 018 on or before 4th June 2011.

Fees

The fees per semester for M.Sc. Economics and M.Sc. Financial Economics are Rs. 11,150 and Rs. 22,100, respectively. Other charges will be as per MSE rules.

Hostel Facility

Madras School of Economics, Chennai offers hostel facility to outstation candidates (separately for boys and girls), subject to availability. Those who need hostel accommodation at MSE should send separate application to The Administrative Officer, MSE, Gandhi Mandapam Road, Chennai – 600 025.

Important Dates

June 4, 2011: Last date for receipt of application

June 19, 2011: Date of Entrance Examination

July 5, 2011: Results

July 12, 2011: Counseling and Admission

August 1, 2011: Semester Starts

ENTRANCE EXAMINATION (2011-12)

CUTN – MSE

19th June 2011

The Entrance Examination will have 100 questions to be completed in 120 minutes. There are two parts – Part A and Part B.

PART A (35 questions)

This part contains multiple choice questions on language, analytical skills and general aptitude.

PART B (65 questions)

Part B contains four sections covering simple mathematics, statistics, advanced mathematics and economics. While the first three sections contain 15 questions each, the last section on economics will contain 20 questions. All questions carry equal marks and there are no negative markings.

The syllabus for the four sections is as follows:

Mathematics – Plus 2 level Mathematics covering functions, linear Algebra, Limits, differential and integral calculus.

Statistics – Basic statistics of Plus 2 level covering measures of central tendency, probability distribution – normal etc.

Advanced Mathematics – Graduate level mathematics covering linear algebra, limits and derivatives, optimization, integration etc.

Economics – Graduate level economics covering topics in micro- and macro-economics and Indian economic development.

Mathematics – Sample Questions

1.	Find the third order derivative of $Y = 5X^3$: <input type="checkbox"/> (a) 30 <input type="checkbox"/> (b) $15X^2$ <input type="checkbox"/> (c) $30X$ <input type="checkbox"/> (d) $5X^2$
2.	$A = \begin{bmatrix} 0 & 0 & 0 \\ 1 & 2 & 3 \\ 2 & 3 & 4 \end{bmatrix}$ $B = \begin{bmatrix} 1 & -2 \\ -1 & 0 \\ 2 & 1 \end{bmatrix}$ Find AB <input type="checkbox"/> (a) $\begin{bmatrix} 0 & 0 \\ 5 & 1 \\ 7 & 0 \end{bmatrix}$ <input type="checkbox"/> (b) $\begin{bmatrix} 1 & -2 \\ 3 & -5 \\ 4 & 9 \end{bmatrix}$ <input type="checkbox"/> (c) $\begin{bmatrix} 3 & -2 \\ 6 & -5 \\ 5 & -7 \end{bmatrix}$ <input type="checkbox"/> (d) $\begin{bmatrix} 2 & -2 \\ 5 & 3 \\ 7 & 4 \end{bmatrix}$
3.	$\lim_{x \rightarrow 5} (3x^3 + 5x^2 - 2x + 3)$ equals: <input type="checkbox"/> (a) 439 <input type="checkbox"/> (b) 493 <input type="checkbox"/> (c) 394 <input type="checkbox"/> (d) 934

4.	<p>If $A = \begin{pmatrix} 2 & 3 & 1 \\ 3 & 4 & 1 \\ 3 & 7 & 2 \end{pmatrix}$ then $A^{-1}A$ is</p> <p><input type="checkbox"/> (a) 0 <input type="checkbox"/> (b) A <input type="checkbox"/> (c) I <input type="checkbox"/> (d) A^2</p>
5.	<p>The point in the interval (3, 5] is</p> <p><input type="checkbox"/> (a) 3 <input type="checkbox"/> (b) 5.3 <input type="checkbox"/> (c) 0 <input type="checkbox"/> (d) 4.35</p>

Statistics – Sample Questions

6.	<p>Probability of sure event is</p> <p><input type="checkbox"/> (a) 1 <input type="checkbox"/> (b) 0 <input type="checkbox"/> (c) -1 <input type="checkbox"/> (d) S</p>
7.	<p>A single letter is selected at random from the word PROBABILITY The probability that it is not a vowel is</p> <p><input type="checkbox"/> (a) 3/11 <input type="checkbox"/> (b) 2/11 <input type="checkbox"/> (c) 4/11 <input type="checkbox"/> (d) 0</p>
8.	<p>If A and B are independent event, then $P(A \cap B)$ is</p> <p><input type="checkbox"/> (a) $P(A) P(B)$ <input type="checkbox"/> (b) $P(A) + P(B)$ <input type="checkbox"/> (c) $P(A/B)$ <input type="checkbox"/> (d) $P(B) - P(A)$</p>
9.	<p>Which expression gives the probability $P\left(\frac{1}{2} < X < 1\right)$ using $F(x)$, given $0 < x < 1$</p> <p><input type="checkbox"/> (a) $P\left(\frac{1}{2} < X < 1\right) = F\left(\frac{1}{2}\right) - F(1)$ <input type="checkbox"/> (b) $P\left(\frac{1}{2} < X < 1\right) = F(1) - F\left(\frac{1}{2}\right)$</p> <p><input type="checkbox"/> (c) $P\left(\frac{1}{2} < X < 1\right) = F(1) + F\left(\frac{1}{2}\right)$ <input type="checkbox"/> (d) $P\left(\frac{1}{2} < X < 1\right) = F(1) - F(0)$</p>
10.	<p>If a constant value 4 is subtracted from each observation of a set, the value of the variance is</p> <p><input type="checkbox"/> (a) reduced by 4 <input type="checkbox"/> (b) reduced by 16 <input type="checkbox"/> (c) reduced by 2 <input type="checkbox"/> (d) unaltered</p>

Advanced Mathematics – Sample Questions

11.	<p>Let $A = \begin{bmatrix} 1 & 2 & 3 \\ 1 & 0 & -1 \\ 3 & 4 & 5 \end{bmatrix}$. Which of the following is true?</p> <p><input type="checkbox"/> (a) A is invertible since $\det(A) = 0$ <input type="checkbox"/> (b) A is not invertible since $\det(A) = 0$</p> <p><input type="checkbox"/> (c) A is invertible since $\det(A) \neq 0$ <input type="checkbox"/> (d) A is not invertible since $\det(A) \neq 0$</p>
12.	<p>Which of the following polynomials leaves a remainder when divided by $x+2$?</p> <p><input type="checkbox"/> (a) $r(x) = (x+2)^{12}$ <input type="checkbox"/> (d) $p(x) = x^2 - 4$ <input type="checkbox"/> (c) $s(x) = x^4 + 3x^2 + 1$ <input type="checkbox"/> (d) $q(x) = -x^3 + 8x^2 + 3x - 34$</p>

