**1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum**

1. **Professional Ethics**

   Ethics and moral were taught for every year. The college religiously practises the ethics and moral instructions and a separate hour was allotted in the first hour of Day order I for First year, first hour of Day order II for Second year and first hour of Day order III for Third year. The importance of ethics and moral was taught and students were given assignment and task related to the topics covered. To enable the students and the staff to begin with each day with positive things, a short service of worship was conducted in all working days at 8.45 A.M for Shift I and 1.40 P.M. for Shift II for religious instructions. A separate instruction regarding the rules and regulations was framed and the students need to adhere the rules and regulations of the college. Out of the income from endowed money, the college awards scholarships to deserving students on the basis of merit and needs. Around 76 awards were given to the students from the endowment. Those who are indiscipline, a separate PTA meeting was held and the behaviour of the students are reported to the concerned student parents. In academic the students were taught the professional ethics through the subjects. In academic the students were taught the professional ethics through the subjects like Business Ethics, Human Resource Management, Business Organisation, Organisational Behaviour and Principles of management were taught in the Arts & Commerce degree courses. To understand the human values, a compulsory paper "HUMAN RIGHTS" were included in every PG course by the University. To develop the technical and communication skills mandatory papers like Effective English, Office Fundamentals and many employability opportunity skill papers were introduced through NAAN MUDALVAN SCHEME in respective years. The Subjects like Mathematics, Statistics, Research Methodology and were taught as allied subject in Arts, Commerce & Science degree courses respectively. Students Welfare Council were installed in the college, each department was represented by a student secretary and representative. The students are trained to conduct and organise the various students' programmes conducted in the college. Every year the College awards special prize for the Best Student in every year in the Moral instructions and religious instructions.

2. **Gender**

   There are number of programmes conducted towards the gender. In case of admission, the gender equality was considered and the admission of girl students were followed as per the government regulations. Women's day was celebrated on March 8th in every year, a special guest was invited and awareness about the role of female in the society was taught. Women's cell has been started in the year 2000. The Cell has been organizing seminars, meetings on women empowerment, self-employment, counselling, women's rights etc., A spacious rest room with separate quarantine was provided exclusively for the women staff and students in the campus. CCTV was installed and it was regularly monitored for the safety and security of women staff and students. Separate Sanitary napkin machine was

installed in the women's rest room. Girls was given priority in the Students Welfare Council and each department represented girl students either as secretary or joint secretary for the student's welfare council. Mrs. S. Annammal Samuel award is given to the best outgoing girl student.
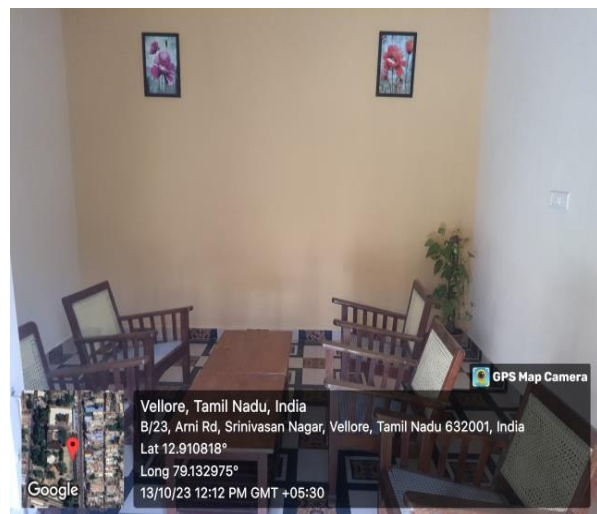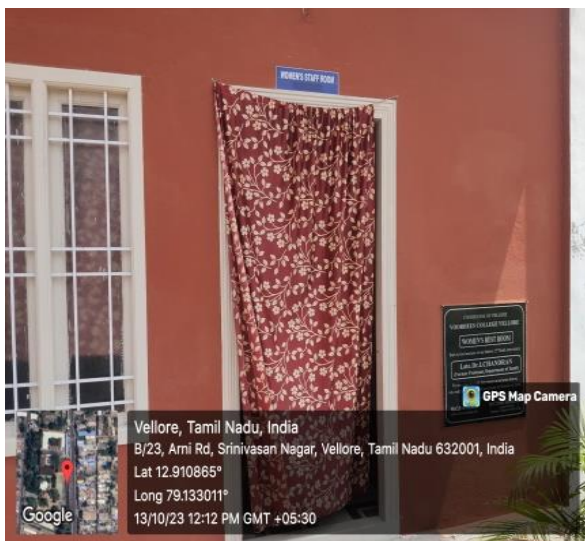








Principal ~in~ Charge,
VOORHEES COLLEGE,
VELLORE - 632 001.

Vellore, Tamil Nadu, India
986, Sri Muthumari Amman Kovil St, Senbakkam, Keelmonavur Village, Vellore, Tamil Nadu 632008, India
Lat 12.928485°
Long 79.122767°
07/09/23 01:53 PM GMT +05:30

3. **Human Values**

National Service Scheme (NSS), Rotaract, Youth Red Cross (YRC) and Red Ribbon Club (RRC) was formed and active in promoting the Human Values. With the collaboration with Christian Medical College many numbers of blood donation camps were conducted. Many students magnanimously donate their blood and support many human values. NSS were grouped in to three groups and every year they conduct separate camp for ten days and serve the adopted village. The members in the YRC and RRC conduct Blood camps and students voluntarily donate the blood to the needy persons in the CMC hospital. Academically Human Rights subjects were taught in the Post-Graduate Courses and a Separate skill paper Value Education were taught to the students in the Under-Graduate Courses. NSS Units conduct various activities such as webinars on volunteering during COVID-19, online workshops on Swachh Campus, Mahatma Gandhi Jayanti, Swachh Bharat Drive, road safety, personal hygiene, election voter turnout, e-waste management, riverbed cleaning, tree saplings planting, COVID-19 vaccination camp, garden work, NSS Day, special puppet shows, debate competition, Aadhaar enrolment camp, cybercrime awareness, and Mega Blood Donation Camp annually. The Youth Red Cross hosts various annual events, including a Bicycle Rally for Independence Day, a State-Level Seminar on World Health Day, Blood Donation Camp, and YRC Study Camp. From 2023, Under "Work Service Programme" the poor and needy persons are assigned work in the office, library and other departments to assist existing staff. The willing students can apply for this and they are paid the amount for their services rendered.

## C.S.I. VELLORE DIOCESE
# Voorhees College
### Vellore -1

## Inauguration of YRC 2019-2020
### and
## Discussion on National Education Policy 2019

Date : 29.07.2019  Monday
Time : 10.00 A.M.  -  1.00 P.M.   Venue : Cobb Hall

**PRESIDENTIAL ADDRESS**

## Dr.A.Nelson Vimalanathan
Principal i/c,  Voorhees College.

*Chief Guest*

## Dr.K.Ameenal Bibi
District Organiser, Youth Red Cross
H.O.D & Associate Professor of Mathematics
D.K.M.College, Vellore.

*Key Note Address*

## Dr.K.Kathiravan
Dept.of Bio-Technology
University of Madras, Chennai.

## Dr.G.R.Ravindranath
Doctors Association for Social Equality
Chennai.

**FELICITATIONS**

**Dr.J.Annie Kamala Florence**
Vice-Principal (Shift-I)

**Prof.A.Russell Premraj Benjamin**
Vice-Principal (Shift-II)

**Dr.S.Caleb Noble Chandar**
Bursar

**ORGANISED BY**

**Dr.S.Sendil Kumar**
Programme Officer,  Youth Red Cross
Voorhees College
&
Co-Ordinating Team



Voorhees College YRC unit **Inaugural Programme** for the academic year 2019-2020, held at Cobb Hall on 29.07.2019, the Keynote Speakers Dr.K.Kathiravan, Professor of Bio-Technology Department, University of Madras Chennai, Dr. G.R.Ravindranath Doctors Association for Social Equality Chennai, Chief guest Dr. K. Ameenal Bibi YRC District Organiser, Vellore, Presidential Address Delivered by Dr.A.Nelson Vimalanathan Principal Voorhees College, Felicitation Dr.J. Annie Kamala Florence Vice-Principal Voorhees College and Dr.S.Sendil Kumar YRC Programme Officer.

Principal -in- Charge,
VOORHEES COLLEGE,
VELLORE - 632 001.

Tree Planting Programme at Voorhees College Campus by YRC volunteers of Voorhees, Dr.A. Nelson Vimalanathan Principal and Dr. C.Caleb Noble Chandar, Bursar  plant the sapling along with  Prof. Naresh Benjamin HOD Department of History and Dr.Anbu Director Physical Education, Dr.S.Sendil Kumar YRC P.O. with Voluntrees and NCC Caders..
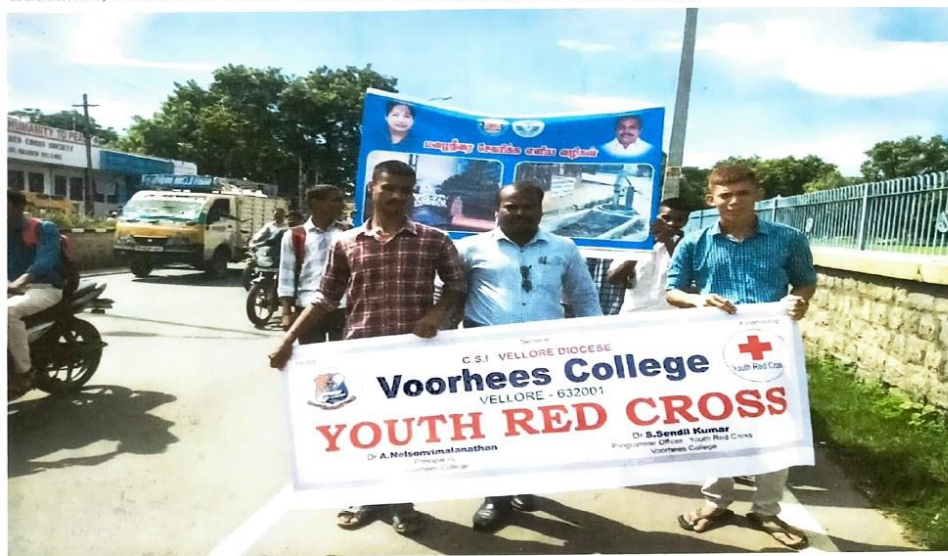


**Road safety Awareness Rally** Conducted by Government Tamil Nadu , Voorhees college YRC 50 volunteers participated.

Principal -in- Charge,
VOORHEES COLLEGE,
VELLORE - 632 001.

## 4. Environment and Sustainability

National Service Scheme (NSS), Rotaract, Youth Red Cross (YRC) and Red Ribbon Club (RRC) was formed and active in promoting the Environment Sustainability. A Separate Eco Club was formed in the College to promote Ecology. Many trees were planted inside the campus and separate garden was placed in the history block and economics block. A Separate Eco Club was formed in the year 2014. The Eco club imparts the knowledge, training and participation to the students with regard to the cleanliness, tidy and conservation, a Separate Convenor was assigned and it was monitored by the Zoology department. As a part of curriculum, the Environmental studies paper was taught as one of the papers in the course. Eco-club organizes annual activities like National Forest Week, World Ozone Day Awareness Competition, Eco-Stall – Green Stop, Campus Cleaning, and Tree plantation program.



Principal ~in~ Charge,
VOORHEES COLLEGE,
VELLORE - 632 001.

# SYLLABUS RELATING TO CROSS-CUTTING ISSUES

# THIRUVALLUVAR UNIVERSITY

## BACHELOR OF ARTS

## B.A. ECONOMICS

### DEGREE COURSE

## CBCS PATTERN

**(With effect from 2022 - 2023)**

| S.NO. | Part | Study Components / Course Title | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni.Exam | Total |
| **SEMESTER I** | | | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | Micro Economics I | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 5 | 3 | Statistics for Economics I | 25 | 75 | 100 |
| 5. | III | ALLIED -1 | Paper-1 | 6 | 3 | **(To choose 1 out of 4)** 1. History of India - I 2. Agricultural Economics 3. Basics of Computer Application I 4. Financial Accounting - I | 25 | 75 | 100 |
| 6. | III | PE | Paper-1 | 6 | 3 | **Professional English I** | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental Studies | 25 | 75 | 100 |
| | | | | 36 | 22 | | 175 | 525 | 700 |
| | | | | | | | | | |
| **SEMESTER II** | | | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| 10. | II | **NMSDC I : Language Proficiency for Employability** | **Paper-1** | **2** | **2** | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | Micro Economics II | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 4 | 3 | Elementary Statistics for Economics II | 25 | 75 | 100 |
| 13. | III | ALLIED-1 | Paper-2 | 6 | 5 | **(To choose 1 out of 4)** 1. History of India II 2. Agricultural Marketing 3. Basics of Computer Application II 4. Financial Accounting II | 25 | 75 | 100 |
| 14. | III | PE | Paper-2 | 6 | 3 | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | | | 36 | 27 | | 200 | 600 | 800 |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni.Exam | Total |
| | | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER III** | | | | | | | | | |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil / Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-5 | 4 | 3 | Indian Economy I | 25 | 75 | 100 |
| 20. | III | Core Theory | Paper-6 | 3 | 3 | Monetary Economics I | 25 | 75 | 100 |
| 21. | III | ALLIED-2 | Paper-3 | 6 | 3 | **(To choose 1 out of 4)** 1. Economics of Entrepreneurship 2. Economic Development of Tamil Nadu - I 3. Women and the Economy 4. Cost and Management Accounting I | 25 | 75 | 100 |
| 22. | IV | Skill based Subject | Paper-1 | 3 | 2 | Interview Skills and Personality Development | 25 | 75 | 100 |
| 23. | IV | Non-major elective | Paper-1 | 2 | 2 | Fundamentals of Economics I | 25 | 75 | 100 |
| | | | | 30 | 21 | | 175 | 525 | 700 |
| | | | | | | | | | |
| **SEMESTER IV** | | | | | | | CIA | Uni.Exam | Total |
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-7 | 4 | 3 | Indian Economy II | 25 | 75 | 100 |
| 27. | III | Core Theory | Paper-8 | 4 | 3 | Monetary Economics II | 25 | 75 | 100 |
| 28. | III | ALLIED-2 | Paper-4 | 6 | 5 | **(To choose 1 out of 4)** 1. Basics Econometrics 2. Economic Development of Tamil Nadu II 3. Development Economics 4. Cost and Management Accounting II | 25 | 75 | 100 |
| **29.** | IV | **NMSDC II : Digital Skills for Employability** | **Paper-2** | **2** | **2** | **Office Fundamentals** | **25** | **75** | **100** |
| 30. | IV | Non-major elective | Paper-2 | 2 | 2 | Fundamentals of Economics II | 25 | 75 | 100 |
| | | | | 30 | 23 | | 175 | 525 | 700 |
| | | | | | | | | | |
| **SEMESTER V** | | | | | | | CIA | Uni.Exam | Total |
| 31. | III | Core Theory | Paper-9 | 6 | 4 | Macro Economics I | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-10 | 6 | 5 | Fiscal Economics I | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-11 | 6 | 4 | Managerial Economics | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper-12 | 6 | 4 | Industrial Economics | 25 | 75 | 100 |

| S.NO. | Part | Study Components | Course Title | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni.Exam | Total |
| 35. | III | Internal Elective | Paper-1 | 3 | 3 | [To choose 1 out of 4] 1.Environmental Economics I 2.International Trade I 3.Industrial Organization I 4.Economics of Capital Market and Digital Economy | 25 | 75 | 100 |
| 36. | IV | Skill based Subject | Paper-2 | 3 | 2 | Introduction to Research Methodology | 25 | 75 | 100 |
| | | | | 30 | 22 | | 150 | 450 | 600 |
| | | | | | | | | | |
| | | **SEMESTER VI** | | | | | CIA | Uni.Exam | Total |
| 37. | III | Core Theory | Paper-13 | 6 | 5 | Macro Economics II | 25 | 75 | 100 |
| 38. | III | Core Theory | Paper-14 | 6 | 4 | Fiscal Economics II | 25 | 75 | 100 |
| 39. | III | Core Theory | Paper-15 | 5 | 4 | History of Economic Thought | 25 | 75 | 100 |
| 40. | III | Compulsory Project | Paper-16 | 5 | 5 | Group / Individual Project | 25 | 75 | 100 |
| 41. | III | Internal Elective | Paper-2 | 3 | 3 | [To choose 1 out of 4] 1.Environmental Economics II 2.International Trade II 3.Industrial Organization II 4.Energy Economics | 25 | 75 | 100 |
| 42. | III | Internal Elective | Paper-3 | 3 | 3 | [To choose 1 out of 4] 1.Labour Economics 2.Insurance & Economics 3.Demography 4. Economics of Development and Planning | 25 | 75 | 100 |
| 43. | III | NMSDC III : Digital Banking and Audit Essential for Employability | Paper-3 | 2 | 2 | Fintech Course | 25 | 75 | 100 |
| 44. | V | Extension Activities | | 0 | 1 | | 100 | - | 100 |
| | | | | 30 | 27 | | 275 | 525 | 800 |
| | | **TOTAL** | | | 142 | | | | 4300 |

| 4 | Yes | Yes | No | No | No | No |
| 5 | Yes | Yes | No | No | No | No |

## UNIT-I: Introduction:                                    (15hrs)

Statistics: Origin and Definition - Relationship with other Subjects - Functions of Statistics - Objectives - Importance and Limitations - Classification – Tabulation: -Objectives, Rules, Types and Parts – Diagrams: Types of Diagrams, One dimensional and Two dimensional - Graphical presentation: Types, Merits and Demerits.

## UNIT-II: Collection of Data                              (15hrs)

Primary And Secondary Data - Methods of Collecting Primary Data: Census and Sampling methods, Random Sampling Method, Pre-testing and Pilot Survey - Sources of Secondary Data: Published and Unpublished Sources – Questionnaire.

## UNIT-III: Measures of Central Tendency                   (15hrs)

Meaning – Definition – Characteristics of a good Average - Objectives of Average - Types of Average: Mean, Median, Mode - Geometric Mean - Harmonic Mean.

## UNIT-IV: Measures of Dispersion                          (15hrs)

Meaning - Definition - Objectives - Characteristics of a good Measures of Dispersion - Types: Range - Quartile Deviation - Mean Deviation - Standard Deviation and Co-efficient of Variation - Lorenz Curve.

## UNIT- V: Skewness and Kurtosis:                          (15hrs)

Skewness: Meaning - Methods – Features – Karl Pearson's Co-efficient of Skewness - Bowley's Co-efficient of Skewness. Kurtosis: Meaning – Moments – Difference between Skewness and Kurtosis.

## TEXT BOOKS:

**Unit-I:** Gupta, S.P.: Statistics for Economic - S. Chand & Company LTD, New Delhi 2017

**Unit-II:** Gupta, S.P.: Statistics for Economic - S. Chand & Company LTD, New Delhi 2017

**Unit-III:** Gupta, S.P.: Statistics for Economic - S. Chand & Company LTD, New Delhi 2017

**Unit-IV:** Gupta, S.P.: Statistics for Economic - S. Chand & Company LTD, New Delhi 2017

5. After studied unit-5, the student will be able to understand probability theorem.

**Matching Table (Put Yes / No in the appropriate box)**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | Yes | Yes | No | Yes | No | No |
| 2 | Yes | Yes | No | Yes | No | No |
| 3 | Yes | Yes | No | Yes | No | No |
| 4 | Yes | Yes | No | No | No | No |
| 5 | Yes | Yes | No | No | No | No |

## UNIT-I: Correlation                                        (12hrs)

Meaning – Types, Measurement of Correlation - Karl Pearson's Co-efficient of Correlation - Spearman's Rank Correlation and Concurrent Deviation Method.

## UNIT-II: Regression                                        (12hrs)

Meaning - Definition - Difference between Correlation and Regression –Importance of Regression Analysis - Regression Equations - Calculation of Regression Coefficient - Correlation Coefficient from Regression Coefficients.

## UNIT-III: Time Series                                      (12hrs)

Time series – Components of Time Series- Measurement of trend – Moving average, method of least square, Seasonal indices by simple average method.

## UNIT-IV: Index Numbers                                     (12hrs)

Meaning - Uses - Problems in The Construction of Index Numbers –Methods of constructing Index numbers – Simple and weighted Index Numbers - Laspyre's Method – Paachee's Method - Fisher's Index Method - Cost of living Index – Uses of Index Numbers.

**UNIT-V: Probability** **(12hrs)**

Meaning - Definition - Uses - Types - Objectives - Empirical Probability - Subjective Probability - Theorems of Probability: Addition Theorem - Multiplication Theorem.

**TEXT BOOKS:**

**Unit-I:** Gupta.S.P.:StatisticsforEconomics – S.Chand& Company LTD, New Delhi 2017

**Unit-II:** Gupta.S.P.:StatisticsforEconomics – S.Chand& Company LTD, New Delhi 2017

**Unit-III:** Gupta.S.P.:StatisticsforEconomics – S.Chand& Company LTD, New Delhi 2017

**Unit-IV:** Gupta.S.P.:StatisticsforEconomics – S.Chand& Company LTD, New Delhi 2017

**Unit-V:** Gupta.S.P.:StatisticsforEconomics – S.Chand& Company LTD, New Delhi 2017

**REFERENCE BOOKS:**

1. D.C.Sancheti , V.K.Kapoor, Statistics Theory, Methods And Application Sultan Chand & Sons New Delhi, 2019

2. S.P.Gupta Statistical Methods Sultan Chand & Sons New Delhi. 2017

3. R.S.N. Pillai and V.BagavathiStatistics Theory and PracticeSultan Chand & Sons New Delhi. 2019

**E - RESOURCES**

1. www.homeandgardenideas.com/Economics statistics/

2. in.zapmetasearch.com/Statistics For Economics

3. www.teoma.co.uk/Economic/Tamil Nadu

4. www.toppr.com/guides/economics/statistics-

5. www.learncbse.in/statistics-for-economics

6. en.wikipedia.org/wiki/economics statistics

7. www.ncrtsolutions.in/...statistics-for-economics-ncert.html

8. books.google.co.in/books/about/statistics.

9. www.thefreedictionary.com/statisticsin.zapmetasearch.com/Statistics For Economics

10. www.investopedia.com/terms/m/Statistics.asp

MAPPING WITH PROGRAMME OUTCOMES

**Matching Table (Put Yes / No in the appropriate box)**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|------|------|------|------|------|------|
| 1 | Yes | Yes | Yes | No | No | No |
| 2 | Yes | Yes | Yes | No | No | No |
| 3 | Yes | Yes | Yes | No | No | No |
| 4 | No | Yes | Yes | No | No | No |
| 5 | No | Yes | Yes | No | No | No |

**UNIT-I: Introduction                                    (9 Hours)**

Interview Meaning - Definition - Types of an Interview - Process of an Interview - Purpose of an Interview - Writing Curriculum Vitae.

**UNIT-II: Employability Skills                          (9 Hours)**

Interpersonal Communication Skill - Critical Thinking Skills - Personal development and presentation skills - Leadership.

**UNIT-III: Interview Skills                              (9 Hours)**

Principles for Success - Do`s and Don`ts before the Interview - During the Interview - After the Interview - Common Interview Errors.

**UNIT-IV: Group Discussion                              (9 Hours)**

Meaning - Definition – Objectives - Group Discussion - Categories of Group Discussion - Structure and Evaluation Components - Tips for Successful Group Discussion.

**UNIT-V: Sample Interview Questions                     (9 Hours)**

Model Interview Questions for Discussion: UPSE Civil services Examinations - Staff Selection communication - Banks - Business Sectors - Higher Jobs in Educations - Guidelines for the Salary Negotiations.

**Text Books:**

**Unit-I:**SajthaJayaprakash Interview Skills and Personality Development Himalaya Publication House2019

**Unit-II:**SajthaJayaprakash Interview Skills and Personality Development Himalaya Publication House2019

**Unit-III:**SajthaJayaprakash Interview Skills and Personality Development Himalaya Publication House2019

**Unit-IV:**SajthaJayaprakash Interview Skills and Personality Development Himalaya Publication House2019

**Unit-V:**SajthaJayaprakash Interview Skills and Personality Development Himalaya Publication House2019

**Reference Books:**

1**.** SajthaJayaprakashInterview Skill, Himalaya Publication House. 2019

2. BarunK.Mitra,Personality Development and Soft Skill,Oxford University. 2019

**E - Resources**

1. gethppy.com/talent-management/how-to-assess...

2. www.cnbc.com/2019/07/24/career-advice-the...

3. resources.workable.com/managers-interview-questions

4. hiring.monster.com/.../interview-for-leadership

5. atmanco.com/blog/hiring/7-personality-questions...

6. www.managementstudyguide.com/personality-traits...

1. After studied unit-1, the student will be able understand the Nature and Scope of Industrial economics and role of public & private sectors.

2. After studied unit-2, the student will be able to acquire knowledge of the theories of

 Industries

3. After studied unit-3, the student will be able to understand the Organization of a Firm,

Ownership, control and objectives of a Firm.

4. After studied unit-4, the student will be able to acquire knowledge of the firm, productive

Efficiency, capacity utilization, profitability and innovation.

5. After studied unit-5, the student will be able to acquire knowledge of Industrial Finance,

Assessment of financial soundness.

**Matching Table (Put Yes / No in the appropriate box)**

| Unit | I. Remembering | ii.Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|------|------|------|------|------|------|
| 1 | Yes | Yes | No | No | No | No |
| 2 | Yes | Yes | Yes | No | No | No |
| 3 | Yes | Yes | No | No | No | No |
| 4 | No | Yes | Yes | No | No | No |
| 5 | Yes | Yes | No | No | No | No |

**UNIT-I:  Framework of Industrial Economics** **(18 Hours)**

Nature and Scope of Industrial Economics - Meaning of Industrialization - Role of Industry in Economic Development - Role of Public and Private Sectors.

**UNIT-II: Theories of Industries** **(18 Hours)**

Theories of Industries: Hoffmann, Chenery and Gerschenkron - Theories of Industrial Location: - Weber's theory of industrial location - Sargant's Florence'sTheory of Location - Factors affecting Location.

## UNIT-III: Market Structure (18 Hours)

Concept and Organization of a Firm - Ownership Control and Objectives of a Firm - Market Structure - Seller's Concentration - Product Differentiation and Entry Conditions.

## UNIT-IV: Market Performance (18 Hours)

Growth of a Firm - Size and Growth of a Firm - Growth and Profitability of a Firm - Constraints on Growth - Productivity - Efficiency - Capacity Utilization - Profitability and Innovation.

## UNIT - V: Industrial Finance (18 Hours)

External and Other Components of Funds - Financial Statement - Balance Sheets - Profit and Loss Account - Assessment of Financial Soundness.

## TEXT BOOKS:

**Unit - I:** Singh A and A N Sadhu, Industrial Economics, Himalaya publishing House, New Delhi 2012

**Unit - II**: Singh A and A N Sadhu, Industrial Economics, Himalaya publishing House, New Delhi 2012

**Unit - III:** Singh A and A N Sadhu, Industrial Economics, Himalaya publishing House, New Delhi 2012

**Unit - IV:** Singh A and A N Sadhu, Industrial Economics, Himalaya publishing House, New Delhi 2012

**Unit - V**: Singh A and A N Sadhu, Industrial Economics, Himalaya publishing House, New Delhi 2012

## Reference Books:

1. Ahluwalia I.J, Industrial Growth in India, Oxford University Press, New Delhi.
2. Barthwal R.R, Industrial Economics, Wiley Eastern Ltd, New Delhi.
3. Desai B, Industrial Economics in India (3rd Edition), Himalaya Publishing House.

# THIRUVALLUVAR UNIVERSITY

## BACHELOR OF ARTS

## B. A. DEFENCE AND STRATEGIC STUDIES

### DEGREE COURSE

### CBCS PATTERN

### (With effect from 2022-2023)

## The Course of Study and the Scheme of Examinations

| S.NO. | Part | Study Components Course Title | | Ins. hrs. /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER I** | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| **2.** | **II** | **English (CE)** | **Paper-1** | **6** | **4** | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | Fundamentals of War And Peace | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 5 | 3 | Defence Mechanism of India | 25 | 75 | 100 |
| 5. | III | ALLIED -1 | Paper-1 | 6 | 3 | Outlines of Political Theory-I | 25 | 75 | 100 |
| **6.** | **III** | **PE** | **Paper-1** | **6** | **3** | **Professional English I** | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental Studies | 25 | 75 | 100 |
| | | | | 36 | 22 | | 175 | 525 | 700 |
| | | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| **9.** | **II** | **English (CE)** | **Paper-2** | **4** | **4** | **Communicative English I** | 25 | 75 | 100 |
| **10.** | **II** | **NMSDC I : Language Proficiency for Employability** | **Paper-1** | **2** | **2** | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | The Art of Warfare in India upto 15th Century | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 4 | 3 | World military History-I (4th cent. BC to Napoleonic Warfare | 25 | 75 | 100 |
| 13. | III | ALLIED-1 | Paper-2 | 6 | 5 | Outlines of Political Theory-II | 25 | 75 | 100 |
| **14.** | **III** | **PE** | **Paper-2** | **6** | **3** | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | | | 36 | 27 | | 225 | 675 | 900 |

# B.A., Defence and Strategic Studies – Syllabus (CBCS)

| | | SEMESTER –III | | | | | CIA | Uni.Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil/ Other Language | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-5 | 4 | 4 | The Art of Warfare in India Since 16<sup>th</sup> Century | 25 | 75 | 100 |
| 20. | IV | Core Theory | Paper-6 | 5 | 4 | World military History-II (Since American War of Independence to World War II) | 25 | 75 | 100 |
| 21. | V | ALLIED -I | Paper-3 | 5 | 3 | General Economics-I | 25 | 75 | 100 |
| 22. | VI | Skill Based Subject | Paper-1 | 2 | 2 | Service Commissions in Indian Armed forces | 25 | 75 | 100 |
| 23. | IV | Non-major elective | Paper-1 | 2 | 2 | Fundamentals of Defence and Strategic Studies | 25 | 75 | 100 |
| | | | | 30 | 23 | | 175 | 525 | 700 |
| | | | | | | | | | |
| | | SEMESTER –IV | | | | | CIA | Uni.Exam | Total |
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/ Other Language | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-7 | 5 | 4 | International Relations and Organizations | 25 | 75 | 100 |
| 27. | III | Core Theory | Paper-8 | 4 | 3 | Limited wars | 25 | 75 | 100 |
| 28. | III | ALLIED -I | Paper-4 | 5 | 5 | General Economics-II | 25 | 75 | 100 |
| 29. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 30. | IV | Non-major elective | Paper-2 | 2 | 2 | Fundamentals National Security | 25 | 75 | 100 |
| | | | | 30 | 24 | | 175 | 525 | 700 |
| | | | | | | | | | |
| | | SEMESTER – V | | | | | CIA | Uni.Exam | Total |
| 31. | III | Core Theory | Paper-9 | 6 | 4 | Armed forces and society | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-10 | 6 | 4 | Strategic thought | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-11 | 6 | 4 | Nuclear Warfare | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper-12 | 6 | 4 | Defence Economics | 25 | 75 | 100 |
| 35. | III | Internal Elective | Paper-1 | 3 | 3 | (To choose any 1 out of 3) A. Warfare in independent India B. Military Geography C. Essentials of Public Administration | 25 | 75 | 100 |
| 36. | IV | Skill based subject | Paper-2 | 3 | 2 | Conflict and Media | 25 | 75 | 100 |
| | | | | 30 | 21 | | 150 | 450 | 600 |
| | | | | | | | | | |

# B.A., Defence and Strategic Studies – Syllabus (CBCS)

**SEMESTER-III**

| Course code | | GENERAL ECONOMICS I | | | | |
|---|---|---|---|---|---|---|
| **Allied 2 Paper 3** | | | | | | |
| | | | **Syllabus Version** | **2020-21** | | |

**Course Objectives:**

To provide a frame work of knowledge relating to the concepts and practice of Economics in Indian context and to make the students understand the application of Economic principles in the strategic sector. Also, to provide insight on the most pressing issue "Demand for Defence Expenditure" i.e. the right size of Defence Budget.

**Expected Course Outcomes:**

On the successful completion of the course, student will be able to:

| 1 | To learn about an introduction to the discipline of Economics. | K1 |
|---|---|---|
| 2 | Understand about the concepts used in Economics | K2 |
| 3 | Identify the various Mechanisms in economics. | K2 |
| 4 | Acquire knowledge about importance of market forms | K3 |
| 5 | To know about economics related to Defence | K4 |

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create

| Unit:1 | | |
|---|---|---|

Economic Analysis - Basic Problems of Economy - Economic Systems - Capitalism - Socialism - Mixed Economy - Communalism - Role of Government.

| Unit:2 | | |
|---|---|---|

Concept and Management of National Income - Problems of Measurement - Trends in NationalIncome and Planning.

| Unit:3 | | |
|---|---|---|

Market Mechanism - Law of Demand and Supply - Elasticity of Demand - Elasticity Measurement - Uses - Limitations.

| Unit:4 | | |
|---|---|---|
| Market Forms - Perfect Competition - Monopoly - Discriminative Monopoly - Monopolistic Competition - Wastes of Monopolistic Competition. | | |
| | | |
| Unit:5 | | |
| Defence Economics - Economics of Conflict and Terrorism - Scope and Definition - Micro and Macro Economic impact - Disarmament and Peace. | | |
| | | |

| Reference | |
|---|---|
| 1 | Dr. S. Sankaran, Micro Economics. |
| 2 | M.L. Jhingan, Micro Economics |
| 3 | Dutt and Sundaram, Indian Economy. |
| 4 | Defence Economics, |

| Mapping with Programme Outcomes | | | | | |
|---|---|---|---|---|---|
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | S | S | M | M | M |
| CO2 | M | M | S | M | M |
| CO3 | S | S | M | S | S |
| CO4 | S | M | S | M | S |
| CO5 | S | M | S | M | S |

*S-Strong; M-Medium; L-Low

**SEMESTER-VI**

| Course code<br>Internal Elective Paper 3 | | B. HUMAN RIGHTS | | |
|---|---|---|---|---|
| | | | Syllabus Version | 2020-21 |

**Course Objectives:**

To introduce the student to the rights of humans in various aspects.

**Expected Course Outcomes:**

On the successful completion of the course, student will be able to:

| 1 | To learn about the evolution and concept of human rights. | K1 |
|---|---|---|
| 2 | Understand about the Approaches and Perspectives in human right. | K2 |
| 3 | Identify the human rights by UN. | K2 |
| 4 | Acquire knowledge about the human rights in Indian Perspective. | K3 |
| 5 | To know about the Issues and Challenges in human rights. | K4 |

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create

| Unit:1 | Definition and evolution of the concept | |
|---|---|---|

(a) Meaning, Nature and Development.

(b) Three Generation Rights.

(c) Contributions: Hobbes, Locke, Rousseau and Rawls.

| Unit:2 | Approaches & Perspectives | |
|---|---|---|

(a) Universalistic and Relativist approaches.

(b) Feminist & Marxist approach.

(c) Third World Perspective- Gandhian view

| Unit:3 | United Nations & Human Rights | |
|---|---|---|

(a) U N Charter and the Universal Declaration of Human Rights.

(b) International Conventions and Covenants.

(c) Other Protocols

| Unit:4 | Indian Perspective | |
|---|---|---|

(a) Human Rights in Indian tradition- Civil, Political, Economic, Cultural Rights &Women's Rights.

(b) Constitutional & Legal framework in India- Human Rights Commission & Special

Commission for weaker section.
(c) Human Rights Education: UNESCO & Montreal Protocol.

| Unit:5 | Issues and Challenges | |
|---|---|---|
| (a) Human Rights and challenges - ethnic conflict, social & political violence, global terrorism, environmental sources. (b) Rights of Refugees. (c) Internally Displaced people. | | |

| Reference | |
|---|---|
| 1 | Bajwa, G.S., Human Rights in India: Implementations and Violations, New Delhi: Sterling, 1995. |
| 2 | Mehta, P.L., Verma,N., Human Rights Under the Indian Constitution, New Delhi : Deep & Deep, 1999. |
| 3 | Donnelly, Jack. The Concept of Human Rights, New York:St.Martin, 1985. |
| 4 | Gibson, John, S., Dictionary of International Human Rights Law, Lanham, MD: |

| Mapping with Programme Outcomes | | | | | |
|---|---|---|---|---|---|
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | S | S | M | M | M |
| CO2 | M | M | S | M | M |
| CO3 | S | S | M | S | S |
| CO4 | S | M | S | M | S |
| CO5 | S | M | S | M | S |

*S-Strong; M-Medium; L-Low

**SEMESTER-V**

| Course code | | DEFENCE ECONOMICS | | | | |
|---|---|---|---|---|---|---|
| Core-XII | | | | | | |
| | | | Syllabus Version | 2020-21 | | |

**Course Objectives:**

The main objectives of this course are to:

On completion of the course the candidates will be also able to appreciate the geographical components of defiance preparedness

**Expected Course Outcomes:**

On the successful completion of the course, student will be able to:

| 1 | Explain Elements of geography | K1 ,K2&K3 |
|---|---|---|
| 2 | Understand Geo political theories | K3 |
| 3 | Acquire knowledge about Remote sensing | K2 |
| 4 | Understand the concept of Natural resources | K3 |
| 5 | Explain maritime borders | K3&K4 |

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create

| Unit:1 | INTRODUCTION | |
|---|---|---|

a) Definition of Economics.
b) Types of Economic Systems – Their Merits and Demerits.
c) Defence Vs Development.

| Unit:2 | Defence Budget | |
|---|---|---|

a) Concept of Finance, Revenue and Expenditure.
b) Budgetary Process, National Income, Gross National Product and Gross Domestic Product.
c) Analysis of India's Defence Budget for the past five years.

| Unit:3 | Defence Planning | |
|---|---|---|

a) Concept of Defence and Important of Defence Planning.
b) System Analysis – Its Utility in Defence Planning.
c) Cost Effectiveness and Choice of Weapons System.

# BACHELOR OF ARTS - B.A. ENGLISH DEGREE COURSE

## The Course of Study and the Scheme of Examinations

| S.NO. | Part | Study Components / Course Title | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | **Study Components** | | | | | **Maximum Marks** | | |
| | | **Course Title** | | | | | CIA | Uni. Exam | Total |
| SEMESTER I | | | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | Indian writing in English | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 5 | 3 | Advanced English Grammar | 25 | 75 | 100 |
| 5. | III | ALLIED -1 | Paper-1 | 6 | 3 | Literary forms and glossary of terms | 25 | 75 | 100 |
| 6. | III | PE | Paper-1 | 6 | 3 | **Professional English I** | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental Studies | 25 | 75 | 100 |
| | | | Sem. Total | 36 | 22 | | 175 | 525 | 700 |
| | | | | | | | | | |
| SEMESTER II | | | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 10. | II | NMSDC I : Language Proficiency for Employability | Paper-1 | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | British Literature I | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 4 | 3 | American literature (classical and modern literature) | 25 | 75 | 100 |
| 13. | III | ALLIED-1 | Paper-2 | 6 | 5 | Social History of England | 25 | 75 | 100 |
| 14. | III | PE | Paper-2 | 6 | 3 | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | | Sem. Total | 36 | 27 | | 200 | 600 | 800 |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| **SEMESTER III** | | | | | | | CIA | Uni. Exam | Total |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil / Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-5 | 4 | 4 | British literature II | 25 | 75 | 100 |
| 20. | III | Core Theory | Paper-6 | 5 | 4 | Introduction to English Phonetics | 25 | 75 | 100 |
| 21. | III | ALLIED-2 | Paper-3 | 5 | 3 | History of English literature I | 25 | 75 | 100 |
| 22. | IV | Skill based Subject | Paper-1 | 2 | 2 | Skills for Employment | 25 | 75 | 100 |
| 23. | IV | Non-major elective | Paper-1 | 2 | 2 | Language skills and communication I | 25 | 75 | 100 |
| | | | Sem. Total | 30 | 23 | | 175 | 525 | 700 |
| | | | | | | | | | |
| **SEMESTER IV** | | | | | | | CIA | Uni. Exam | Total |
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-7 | 5 | 4 | British literature III | 25 | 75 | 100 |
| 27. | III | Core Theory | Paper-8 | 4 | 3 | History of English Language | 25 | 75 | 100 |
| 28. | III | ALLIED-2 | Paper-4 | 5 | 5 | History of English Literature II | 25 | 75 | 100 |
| 29. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 30. | IV | Non-major elective | Paper-2 | 2 | 2 | Language skills and communication II | 25 | 75 | 100 |
| | | | Sem. Total | 30 | 24 | | 175 | 525 | 700 |
| | | | | | | | | | |
| **SEMESTER V** | | | | | | | CIA | Uni. Exam | Total |
| 31. | III | Core Theory | Paper-9 | 5 | 4 | British literature IV | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-10 | 6 | 4 | Shakespeare | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-11 | 6 | 4 | Literary Criticism. | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper-12 | 6 | 4 | Subaltern Literature | 25 | 75 | 100 |
| 35. | III | Internal Elective | Paper-1 | 4 | 3 | (to choose one out f two) A. Children Literature B. Journalism | 25 | 75 | 100 |
| 36. | IV | Skill based Subject | Paper-2 | 3 | 2 | Content writing | 25 | 75 | 100 |
| | | | Sem. Total | 30 | 21 | | 150 | 450 | 600 |
| | | | | | | | | | |
| **SEMESTER VI** | | | | | | | CIA | Uni. Exam | Total |
| 37. | III | Core Theory | Paper-13 | 5 | 4 | Contemporary Literature | 25 | 75 | 100 |
| 38. | III | Core Theory | Paper-14 | 5 | 4 | Indian Writing in Translation | 25 | 75 | 100 |
| 39. | III | Core Theory | Paper-15 | 5 | 3 | New Literatures in English | 25 | 75 | 100 |
| 40. | III | Compulsory Project | Paper-16 | 5 | 5 | Group / Individual Project | 25 | 75 | 100 |
| 41. | III | Internal | Paper-2 | 4 | 3 | (to choose one out f two) | 25 | 75 | 100 |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| | | Elective | | | | A. English Information Technology<br>B. Film appreciation and book review | | | |
| 42. | III | Internal Elective | Paper-3 | 3 | 3 | (to choose one out f two)<br>A. English for Specific Purpose<br>B. Creative Writing | 25 | 75 | 100 |
| 43. | IV | Skill based Subject | Paper-3 | 3 | 2 | English Language Teaching | 25 | 75 | 100 |
| 44. | V | Extension Activities | | 0 | 1 | | 100 | - | 100 |
| 45. | | NMSDC III : Employability Readiness | | 0 | 0 | (choose any one)<br>• Naandi<br>• Unnati<br>• Quest<br>• Izpay<br>• IBM Skills build | - | - | |
| | | | Sem. Total | 30 | 25 | | 275 | 525 | 800 |
| | | | Grand Total | | 142 | | | | 4300 |

# THIRUVALLUVAR UNIVERSITY
## BACHELOR OF ARTS
# B.A. HISTORY
## DEGREE COURSE
# CBCS PATTERN
### (With effect from 2022- 2023)
## The Course of Study and the Scheme of Examinations

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| SEMESTER I | | | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | History of India upto 1206CE | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 5 | 3 | History of India from 1206 to1707 CE | 25 | 75 | 100 |
| 5. | III | ALLIED -1 | Paper-1 | 6 | 3 | (to choose any 1 out of 4)<br>1. Outlines of Political Theory- **I**<br>2. Studies on States and Governments- I<br>3. Principles of Public Administration - **I**<br>4. Principles of Sociology- **I** | 25 | 75 | 100 |
| 6. | III | PE | Paper-1 | 6 | 3 | **Professional English– I** | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental Studies | 25 | 75 | 100 |
| | | | | 36 | 22 | | 175 | 525 | 700 |
| | | | | | | | | | |
| SEMESTER II | | | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| 10. | II | **NMSDC I : Language Proficiency for Employability** | **Paper-1** | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | History of India from 1707 to 1885CE | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 4 | 3 | History of India from 1885 to 1947 CE | 25 | 75 | 100 |
| 13. | III | ALLIED-1 | Paper-2 | 6 | 5 | (to choose any 1 out of 4)<br>1. Outlines of Political Theory - II<br>2. Studies on States and Governments- II<br>3. Principles of Public Administration - II<br>4. Principles of Sociology – II | 25 | 75 | 100 |
| 14. | III | PE | Paper-2 | 6 | 3 | **Professional English – II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skills | 25 | 75 | 100 |
| | | | | 36 | 27 | | 200 | 600 | 800 |

| S.NO. | Part | Study Components | Course Title | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER III** | | | | | CIA | Uni. Exam | Total |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil / Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-5 | 4 | 3 | History of India from1947 to 2014 CE | 25 | 75 | 100 |
| 20. | III | Core Theory | Paper-6 | 4 | 3 | History of TamilNaduupto 1336 CE | 25 | 75 | 100 |
| 21. | III | ALLIED-2 | Paper-3 | 6 | 3 | (to choose 1 out of 4) <br> 1. Tourism - I <br> 2. Indian Economy - I <br> 3. Media Studies - I <br> 4. Journalism– I | 25 | 75 | 100 |
| 22. | IV | Skill based Subject | Paper-1 | 2 | 2 | Cultural Heritage of TamilNadu | 25 | 75 | 100 |
| 23. | IV | Non-major elective | Paper-1 | 2 | 2 | (to choose 1 out of 2) <br> 1. Fundamentals of Defence and Strategic Studies <br> 2. National Movement in India | 25 | 75 | 100 |
| | | | | 30 | 21 | | 175 | 525 | 700 |
| | | | | | | | | | |
| | | **SEMESTER IV** | | | | | CIA | Uni. Exam | Total |
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-7 | 4 | 3 | History of TamilNadu from 1336 to 1806 CE | 25 | 75 | 100 |
| 27. | III | Core Theory | Paper-8 | 4 | 3 | History of TamilNadu from 1806 to 2011 CE | 25 | 75 | 100 |
| 28. | III | ALLIED-2 | Paper-4 | 6 | 5 | (to choose 1 out of 4) <br> 1. Tourism - II <br> 2. Indian Economy - II <br> 3. Media Studies - II <br> 4. Journalism - II | 25 | 75 | 100 |
| 29. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 30. | IV | Non-major elective | Paper-2 | 2 | 2 | (to choose 1 out of 2) <br> 1. Fundamentals of National Security <br> 2. Indian Constitution | 25 | 75 | 100 |
| | | | | 30 | 23 | | 175 | 525 | 700 |
| | | | | | | | | | |
| | | **SEMESTER V** | | | | | CIA | Uni. Exam | Total |
| 31. | III | Core Theory | Paper-9 | 6 | 4 | History of Europe from 1453 to 1789 CE | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-10 | 6 | 4 | History of USA from 1861 to 1932 CE | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-11 | 6 | 5 | History of China and Japan from 1900 to 2000 CE | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper-12 | 6 | 4 | Constitutional History of India from 1773 to 1950 CE | 25 | 75 | 100 |
| 35. | III | Internal Elective | Paper-1 | 3 | 3 | [to choose 1 out of 3 ] <br> 1. History of Freedom movement in TamilNadu from 1800 to 1947 CE | 25 | 75 | 100 |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| | | | | | | 2. Women Development in TamilNadu from 1900 to 2000 CE <br> 3. Archaeology –I | | | |
| 36. | IV | Skill based Subject | Paper-2 | 3 | 2 | Competitive Examinations | 25 | 75 | 100 |
| | | | | 30 | 22 | | 150 | 450 | 600 |
| | | | | | | | | | |
| **SEMESTER VI** | | | | | | | CIA | Uni. Exam | Total |
| 37. | III | Core Theory | Paper-13 | 6 | 5 | History of Europe from 1789 to 1945 CE | 25 | 75 | 100 |
| 38. | III | Core Theory | Paper-14 | 5 | 4 | History of USA from 1932 to 2000 CE | 25 | 75 | 100 |
| 39. | III | Core Theory | Paper-15 | 5 | 4 | International Relations since 1945 CE | 25 | 75 | 100 |
| 40. | III | Compulsory Project | Paper-16 | 5 | 5 | Group / Individual Project | 25 | 75 | 100 |
| 41. | III | Internal Elective | Paper-2 | 3 | 3 | **[to choose 1 out of 4 ]** <br> 1. History of Science and Technology in India upto 1900 CE <br> 2. Dravidian Movement in TamilNaduupto 1947 CE <br> 3. History of the Arabs from750 to 1258 CE <br> 4. History of Russia from early times to 1917 CE | 25 | 75 | 100 |
| 42. | III | Internal Elective | Paper-3 | 3 | 3 | **[to choose 1 out of 4 ]** <br> 1. History of Science and Technology since 1900 CE <br> 2. Dravidian Movement in TamilNadusince 1947 CE <br> 3. An introduction to Museology <br> 4. Archaeology –II | 25 | 75 | 100 |
| 43. | IV | Skill Based Subject | Paper-3 | 3 | 2 | Growth of Panchayat Raj Institutions in TamilNadu | 25 | 75 | 100 |
| 44. | V | Extension Activities | | 0 | 1 | | 100 | - | 100 |
| 45. | | NMSDC III : Employability Readiness | | 0 | 0 | (choose any one) <br> • Naandi <br> • Unnati <br> • Quest <br> • Izpay <br> • IBM Skills build | - | - | |
| | | | | 30 | 27 | | 275 | 525 | 800 |
| | **TOTAL** | | | | 142 | | | | |

# ALLIED - 3
# PAPER - 2
# INDIAN ECONOMY - I

## Objectives

To enable the students to understand the salient features of Indian and occupational structure to assess the relative share of Agriculture industry and service sectors in the economy, and to analyse the benefits of planning. First and second units help the students to know the meaning and salient features of Indian economy and five year plans. Third and Fourth units covered the Agriculture role n Indian economy and Agricultural marketing fifth unit to know about Industries.

## Learning Outcomes

After the successful completion of this course providing the students to acquire.

(i)     Evaluate the characters of Economy, Factors development

(ii)    Explain about the planning Commissions- performances

(iii)   Understand about Agriculture role (GNP) (APC) – Need and source

(iv)    Explain broadly Marketing Role of FC

(v)     Evaluates the importance and role of industry

## UNIT - I

Meaning and Characteristics of Under-Development - Salient features of Indian Economy - Factors responsible for Development –Difference between Development and Growth - Comparison between India and other Developing countries like China, Pakistan, Taiwan, and Korea.

## UNIT - II

Planning in India - Meaning, process and approaches - Five Year Plans - Objectives in general and targets and performances.

## UNIT - III

Agricultural role in Indian Economy (Contribution to GNP, employment, etc.,) Problems of low productivity - Land Reforms - Need and Scope - The food problem and Green Revolution- Mechanisation - Desirability and feasibility.

**UNIT - IV**

Agricultural Marketing - Regulated Markets - Warehousing - Role of Agricultural Price Commission (APC) - Procurement Policy – BufferStock - Dual Pricing - Role of FC- . Agricultural Credit-  Need and Sources.

**UNIT - V**

Industry and Its importance - Role of Small Scale Industry - Large Scale Industries (Iron & Steel, Cotton, Textiles, Sugar, Jute, Petro-chemicals, Tea, etc.,) Industrial Sickness - Causes and measures - Industrial Policy Resolutions (1956, 1985 & 1991)

**Reference Books:**

1. 1.Agarwal, A.N. Indian Economy, Vikas Publishing house , New Delhi.

2. 2.Dewett, Verma & Sharma: Indian Economics, S Chand & Co., New Delhi.

3. Jhingan .M.L.:Economics of development and planning, Konark publishers, New Delhi.

4. 4.Kindle berger : Economic Development, to the Mohammad conquest, Oxford University press, London.

5. Kanka, S.S: Human Resource Management, S. Chand & Co., New Delhi.

6. PramitChaudhury : The Indian Economy, Poverty and development, Vikas Publishing house, New Delhi.

**ALLIED - 4**

**PAPER - 2**

**INDIAN ECONOMY - II**

**Objectives**

      To Enable the students to understand the Industrial Finance, Privatisation and Economic Reforms, Human Resource and Economic Development, Labour Economics and Foreign Trade.

**Learning Outcomes**

On Successful Completion of the Course the Students will be able to

    To Explain about Industrial Finance , Development Financial Institutions , Foreign Capital, Various  forms

    To know about Privatisation and Economic Reforms, New  Economic Policy, Economic Reforms ,Common Minimum Programme (CMP)

    To learn about Human Resource and Economic Development, New population  Policy, Unemployment, Poverty and Govt.  Remedial measures

    To Explain about Trade Unions ,Industrial Relations, Mechanisation and labour problems, Labour Legislations ,Social Security Schemes

    To Understand India in the Global Market, Functions of IMF, IBRD and WTO.

**UNIT-I**

      Industrial Finance - Need and sources of credit - Development Financial Institutions  (IFCI, SFC, ICICI, IDBI, SIDBI, IIBI, EXIM Bank, etc.) Foreign Capital - Various    forms (Foreign - Public Vs Private and Loans Vs. Investments, etc.,) FDI and FII.

**UNIT-II**

      Privatisation and Economic Reforms - Public Vs. Private Sector - Debate, New Economic Policy (Liberalisation, Privatisation and Globalisation) - Economic Reforms Phase-I (1985-1990); Phase II 1991 &After - reforms pertain to the following policies-  Fiscal, Monetary, Pricing, Industrial, Trade, Public Sector, External      and Foreign Investment - Common Minimum Programme (CMP)

**UNIT-III**

      Human Resource and Economic Development- Unique demographic features in India - Growth rate, density, Gender-wise and age-wise distribution, etc., - New Population Policy (Integration of Economic and Population Planning). Unemployment and Poverty - Remedial measures and Govt. Schemes like IRDP, Micro Finance, etc., Business Process Outsourcing (BPO) - Problems and benefits to India.

**UNIT-IV**

      Labour Economics - Trade Unions - Industrial Relations - Industrial Disputes - Mechanisation and Labour problems - Labour Legislations - Social Security Schemes - recent policy changes - Contributory Pension Schemes, etc.,

**UNIT-V**

      Foreign Trade and Balance of Payments - Position, Problems and measures to improve- India in the Global Market - Functions of IMF, IBRD and WTO.

**Reference Books:**

1. Agrawal, A.N.       : Indian Economy, Vikas Publishing House, New Delhi.

2. Alak Ghosh       : Indian Economy, The World Press, Kolkatta.

3. Bimal Jalan       : Indian Economic Crisis, Oxford University Press, Chennai.

4. Dewett, Verma & Sharma  : Indian Economics, S.Chand& Co.,

5. Dhingra, I.C.       : Indian Economy, Sultan Chand & Co.,

6. Jhingan, M.L.       : Economics of Development & Planning, Konark Publishers, New Delhi.

7. Kanka, S.S.       : Human Resource Management, S.Chand& Co.,

8. Mongia, J.N. (Editor)    : India's Economic Policies, Allied Publishers

# THIRUVALLUVAR UNIVERSITY
## BACHELOR OF ARTS
### DEGREE COURSE
## B.A. TAMIL
### CBCS PATTERN
(With effect from 2022 – 2023)

**The Course of Study and the Scheme of Examination**

| S. No. | Part | Study Components / Course Title | | Ins. Hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni.Exam | Total |
| **SEMESTER I** | | | | | | | CIA | Uni.Exam | Total |
| 1. | I | Language | Paper-1 | 6 | 4 | தமிழ்/பிறமொழிகள் | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | இக்கால இலக்கியம் (கவிதை, உரைநடை, நாடகம், புதினம், சிறுகதை) | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 4 | 3 | இலக்கணம் - 1 நன்னூல் (எழுத்ததிகாரம்) | 25 | 75 | 100 |
| 5. | III | ALLIED – 1 | Paper-1 | 7 | 4 | தமிழக வரலாறும் பண்பாடும் | 25 | 75 | 100 |
| 6. | III | PE | Paper-1 | 6 | 3 | **Professional English I** | 25 | 75 | 100 |
| 7. | IV | Environment Studies | | 2 | 2 | சுற்றுச் சூழல் பிரிவுகள் | 25 | 75 | 100 |
| | | | **TOTAL** | **36** | **23** | | **175** | **450** | **600** |
| **SEMESTER II** | | | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | தமிழ்/பிறமொழிகள் | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| 10. | II | NMSDC I : Language Proficiency for Employability | Paper-1 | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | இக்கால இலக்கியம் (கவிதை, உரைநடை, நாடகம், புதினம், சிறுகதை) | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 3 | 3 | இலக்கணம் - 2 நன்னூல் (சொல்லதிகாரம்) | 25 | 75 | 100 |
| 13. | III | ALLIED – 1 | Paper-2 | 7 | 5 | தமிழக வரலாறும் பண்பாடும் | 25 | 75 | 100 |
| 14. | III | PE | Paper-1 | 6 | 3 | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | மதிப்புக் கல்வி | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | | **TOTAL** | **36** | **27** | | **225** | **675** | **900** |

| S. No. | Part | Study Components Course Title | | Ins. Hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER III** | | | | | | | **CIA** | **Uni. Exam** | **Total** |
| 17. | I | Language | Paper-3 | 6 | 4 | தமிழ்/பிறமொழிகள் | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | ஆங்கிலம் | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-5 | 3 | 3 | இலக்கியம் 3 சமயப்பாடல்களும் சிற்றிலக்கியங்களும் | 25 | 75 | 100 |
| 20. | III | Core Theory | Paper-6 | 3 | 3 | இலக்கணம் - 3யாப்பருங்கலக்காரிகை | 25 | 75 | 100 |
| 21. | III | ALLIED – 2 | Paper-3 | 7 | 4 | தமிழ் இலக்கிய வரலாறு - 1 | 25 | 75 | 100 |
| 22. | IV | Skill based Subject | Paper-1 | 3 | 2 | பயன்பாட்டுத் தமிழ் | 25 | 75 | 100 |
| 23. | IV | Non-major elective | Paper-1 | 2 | 2 | தமிழ்மொழி – அடிப்படை இலக்கணம் | 25 | 75 | 100 |
| | | | **TOTAL** | **30** | **22** | | **175** | **525** | **700** |
| **SEMESTER IV** | | | | | | | **CIA** | **Uni. Exam** | **Total** |
| 24. | I | Language | Paper-4 | 6 | 4 | தமிழ்/பிறமொழிகள் | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | ஆங்கிலம் | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-7 | 4 | 3 | இலக்கியம் 4 காப்பியங்கள் | 25 | 75 | 100 |
| 27. | III | Core Theory | Paper-8 | 3 | 3 | இலக்கணம் - 4தண்டியலங்காரம் (பொருளணியியல் மட்டும்) | 25 | 75 | 100 |
| 28. | III | ALLIED – 2 | Paper-4 | 7 | 4 | தமிழ் இலக்கிய வரலாறு - 2 | 25 | 75 | 100 |
| 29. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 30. | IV | Non-major elective | Paper-2 | 2 | 2 | இணையம் | 25 | 75 | 100 |
| | | | **TOTAL** | **30** | **22** | | **175** | **525** | **700** |
| **SEMESTER V** | | | | | | | **CIA** | **Uni. Exam** | **Total** |
| 31. | III | Core Theory | Paper-9 | 5 | 4 | சங்க இலக்கியம் (அகம்) | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-10 | 6 | 5 | இலக்கணம் 5 (அகம்) | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-11 | 6 | 4 | தமிழ்மொழி வரலாறு | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper-12 | 6 | 4 | இலக்கியத் திறனாய்வு | 25 | 75 | 100 |
| 35. | III | Elective | Paper-1 | 4 | 3 | (கீழ்க்கண்ட மூன்றில் ஏதேனும் ஒன்றைத் தெரிவுசெய்துகொள்ளலாம்) அ. தகவல் தொழில்நுட்பம் ஆ. நாட்டுப்புறவியல் இ. விளம்பரக்கலை | 25 | 75 | 100 |
| 36. | IV | Skill based Subject | Paper-2 | 3 | 2 | தொல்லியல் | 25 | 75 | 100 |
| | | | **TOTAL** | **30** | **22** | | **150** | **450** | **600** |

| S. No. | Part | Study Components / Course Title | | Ins. Hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER VI** | | | | | | | | | |
| 37. | III | Core Theory | Paper-13 | 5 | 4 | சங்க இலக்கியம் (புறம்) | 25 | 75 | 100 |
| 38. | III | Core Theory | Paper-14 | 5 | 4 | இலக்கணம் 6 (புறம்) | 25 | 75 | 100 |
| 39. | III | Core Theory | Paper-15 | 5 | 4 | திராவிட மொழிகளின் ஒப்பிலக்கணம் | 25 | 75 | 100 |
| 40. | III | Compulsory Project | Paper-16 | 5 | 5 | Group / Individual Project | 25 | 75 | 100 |
| 41. | III | Elective | Paper-2 | 4 | 3 | (கீழ்க்கண்ட மூன்றில் ஏதேனும் ஒன்றைத் தெரிவுசெய்துகொள்ளலாம்) அ. இதழியல் ஆ. புத்தக பதிப்பியல் இ. தமிழ் உரைநடை வரலாறு | 25 | 75 | 100 |
| 42. | III | Elective | Paper-3 | 4 | 3 | (கீழ்க்கண்ட மூன்றில் ஏதேனும் ஒன்றைத் தெரிவுசெய்துகொள்ளலாம்) அ. தமிழர் அழகுக் கலைகள் ஆ. பெண்ணியம் இ. சுற்றுலாவியல் | 25 | 75 | 100 |
| 43. | IV | Skill based Subject | Paper-3 | 2 | 2 | தகவல் தொடர்பியல் | 25 | 75 | 100 |
| 44. | V | Extension Activities | | 0 | 1 | விரிவாக்கச் செயல்பாடுகள் | 100 | - | 100 |
| 45. | | **NMSDC III : Employability Readiness** | | **0** | **0** | **(choose any one)** • **Naandi** • **Unnati** • **Quest** • **Izpay** • **IBM Skills build** | - | - | |
| | | | **TOTAL** | **30** | **26** | | **250** | **450** | **700** |

# THIRUVALLUVAR UNIVERSITY

## BACHELOR OF BUSINESS ADMINISTRATION

## DEGREE COURSE
## CBCS PATTERN

**(With effect from 2022 - 2023)**

### The Course of Study and the Scheme of Examinations

| S.NO. | Part | Study Components / Course Title | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| SEMESTER I | | | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | Principles of Management | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 5 | 3 | Business Mathematics & Statistics I | 25 | 75 | 100 |
| 5. | III | ALLIED -1 | Paper-1 | 6 | 3 | (**to choose any 1 out of 3**) A. Business Organization B. Principles of Insurance C. Business Ethics | 25 | 75 | 100 |
| 6. | III | PE | Paper-1 | 6 | 3 | **Professional English I** | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental Studies | 25 | 75 | 100 |
| | | | | 36 | 22 | | 175 | 525 | 700 |
| | | | | | | | | | |
| SEMESTER II | | | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 10. | II | NMSDC I : Language Proficiency for Employability | Paper-1 | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | Business Environment | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 4 | 3 | Business Mathematics & Statistics II | 25 | 75 | 100 |
| 13. | III | ALLIED-1 | Paper-2 | 6 | 5 | (**to choose any 1 out of 3**) A. Customer Relationship Management B. Principles of Banking System C. Fundamentals of Computer | 25 | 75 | 100 |
| 14. | III | PE | Paper-2 | 6 | 3 | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | | | 36 | 27 | | 225 | 675 | 900 |

| | | **SEMESTER III** | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil / Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-6 | 5 | 4 | Financial Accounting | 25 | 75 | 100 |
| 20. | III | Core Theory | Paper-7 | 5 | 4 | Human Resource Management | 25 | 75 | 100 |
| 21. | III | ALLIED-2 | Paper-3 | 4 | 3 | (to choose any 1 out of 3)<br>A. Office Management<br>B. Service Marketing<br>C. Tourism Management | 25 | 75 | 100 |
| 22. | IV | Skill based Subject | Paper-1 | 2 | 2 | Business Communication | 25 | 75 | 100 |
| 23. | IV | Non-major elective | Paper-1 | 2 | 2 | Management Concepts | 25 | 75 | 100 |
| | | | | **30** | **23** | | **175** | **525** | **700** |
| | | | | | | | | | |
| | | **SEMESTER IV** | | | | | CIA | Uni. Exam | Total |
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-9 | 5 | 4 | Organizational Behavior | 25 | 75 | 100 |
| 27. | III | Core Theory | Papr-11 | 4 | 4 | Management Accounting | 25 | 75 | 100 |
| 28. | III | ALLIED-2 | Paper-4 | 5 | 5 | (to choose any 1 out of 3)<br>A. Retail Management<br>B. Project Management<br>C. Hotel Management | 25 | 75 | 100 |
| **29.** | IV | **NMSDC II : Digital Skills for Employability** | **Paper-2** | **2** | **2** | **Office Fundamentals** | **25** | **75** | **100** |
| 30. | IV | Non-major elective | Paper-2 | 2 | 2 | Training and Development | 25 | 75 | 100 |
| | | | | **30** | **25** | | **175** | **525** | **700** |
| | | | | | | | | | |
| | | **SEMESTER V** | | | | | CIA | Uni. Exam | Total |
| 31. | III | Core Theory | Paper-13 | 6 | 4 | Marketing Management | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-14 | 6 | 4 | Business Law | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-15 | 5 | 4 | Research Methodology | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper-16 | 5 | 4 | Production and Management | 25 | 75 | 100 |

| 35. | III | Elective | Paper-1 | 5 | 3 | (To choose any 1 out of 3)<br>A. Industrial Relations and Labour Laws<br>B. Reward Management<br>C. Change Management | 25 | 75 | 100 |
|-----|-----|----------|---------|---|---|---|-----|-----|-----|
| 36. | IV | Skill based Subject | Paper-2 | 3 | 2 | E-Business | 25 | 75 | 100 |
| | | | | **30** | **21** | | **150** | **450** | **600** |
| | | | | | | | | | |
| | | | **SEMESTER VI** | | | | **CIA** | **Uni. Exam** | **Total** |
| 37. | III | Core Theory | Paper-17 | 6 | 5 | Strategic Management | 25 | 75 | 100 |
| 38. | III | Core Theory | Paper-18 | 6 | 5 | International Business | 25 | 75 | 100 |
| 39. | III | Core | Paper-19 | 6 | 5 | Individual Project<br>*Viva-Voce      ** Project Report | 25* | 75** | 100 |
| 40. | III | Elective | Paper-2 | 5 | 3 | (to choose any 1 out of 3)<br>A.   Financial Management<br>B.   Financial Services<br>C.   Investment Management | 25 | 75 | 100 |
| 41. | III | Elective | Paper-3 | 5 | 3 | (to choose any 1 out of 3)<br>A. Marketing Research<br>B. Rural Marketing Management<br>C. Advertising and Sales Management | 25 | 75 | 100 |
| 42. | III | NMSDC III : Digital banking and Audit Essentials for Employability | Paper-3 | 2 | 2 | Fintech Course | 25 | 75 | 100 |
| 43. | V | Extension Activities | | 0 | 1 | Extension Activities | 100 | 0 | 100 |
| | | **Total** | | **30** | **24** | | **150** | **450** | **700** |
| | | | | | **142** | | | | **4200** |

**Semester: VI**                                                    **Paper type: Core Theory**

**Paper code: CBA62**          **International Business**                **Credit: 5**

**Total Hours per Week: 6**          **Lecture Hours: 5**          **Tutorial Hour: 1**

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**Course Objectives**

1. To enable the students to understand the meaning and importance of globalization and international business
2. To familiarize them with various modes of entering globalmarkets.
3. To help them understand how trade policies are used and how trade is restricted
4. To impart the students with regional economicintegrations.
5. To examine the international monetary, strategy & marketing environment.

**Course Outcome**

1. After the study of unit-1, the student will be able to define and explain the importance of globalization and international business
2. After the study of unit-2, the student will be known the options used and various modes of entering globalmarkets.
3. After the study of unit-3, the student will understand how governments use trade policies to restrict movement of goods abroad
4. After the study of unit-4, the student will be familiar with how various regional co operational organization work and their functions.
2. After the study of unit-5, the student will be able make decisions of setting up MNCs and know how to invest abroad to establish MNC

**Matching Table**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | YES | YES | YES | YES | YES | YES |
| 2 | YES | YES | YES | YES | YES | YES |
| 3 | YES | YES | YES | YES | YES | YES |
| 4 | YES | YES | YES | YES | YES | YES |
| 5 | YES | YES | YES | YES | YES | YES |

**UNIT- I**                                                         **Teaching hours: 18**

**INTRODUCTION TO INTERNATIONAL BUSINESS**
International Business: Meaning, Objectives - Domestic Vs International Business - understanding LPG (Liberalization, Privatisation and Globalisation - Globalisation: Definition, Features and drivers of globalisation - Impediments in International Business, International Business Environment - Political, Legal system, Cultural, Economic, Governments,

**UNIT- II**                                                      **Teaching hours: 18**

**ENTRY MODES**
Modes of International Business - Exports & Imports - Licensing - Franchising - Management Contracts - Joint Ventures - Turnkey Projects - Wholly - owned Subsidiaries - Strategic Alliances - Mergers & Acquisitions - Contract Manufacturing - International Trade theories : Mercantilism, Comparative Advantage Theory - Absolute advantage theory, Heckscher - Ohlin Theory, Product Life cycle theory

**UNIT- III**                                                     **Teaching hours: 18**

**TRADE POLICIES and WTO**
Trade policies: Meaning of trade restrictions, Reasons for trade restrictions tools - Various Trade Restriction tools or policies: Tariffs, Import quota, Voluntary export restraints, Local content requirement, Administrative policies and Anti-dumping policies - GATT ( General agreement on tariff and trade: Meaning, Emergence of GATT, Objectives of GATT - Emergence of WTO (World trade organization: Functions, Objectives

**UNIT- IV**                                                      **Teaching hours: 18**

**REGIONAL ECONOMIC INTEGRATION**
Regional Economic Integration: Meaning, Objectives - Levels of EconomicIntegration - NAFTA - Features & Impact - ASEAN - Vision, Free Trade Areas & Economic Community - SAARC - Objectives- Principles - Potential Areas of Cooperation - Problems - Role of India - BRICS - Objectives - Focus of BRICS - Target Sectors for BRICSTrade.

**UNIT- V**                                                       **Teaching hours: 18**

**FOREIGN DIRECT INVESTMENT AND MNCS**
Foreign Direct Investments: Meaning, Features - Growth of FDI - FDI Sources - Forms of making FDI: Greenfield, Horizontal and vertical - Why Organizations go for FDI? - FDI & Host Nation Advantages and Drawbacks - FDI & Home Nation Advantages - MNC & MNE: Meaning, Features - Types of MNCs: Polycentric, Ethnocentric, region-centric and global centric.

**Text books**

1. K. Aswathappa, International Business, Tata Mc-Graw Hill,2012
2. Francis Cherunilam, International Business Environment, Himalaya Publishing House Pvt. Ltd., 2015
3. Sanjay Misra, P.K. Yadav, International Business : Text & Cases, PHI Learning, New Delhi,2009
4. John Daniels, International Business : Environments & Operations, Pearson Education,2009
5. Francis Cherunilam, International Business- Text & Cases, PHI Learning.
6. Helen Deresky, International, Textbooks.com
7. John Wild, International Business, Textbooks.com
8. Thingan, International Economics, Vrinda Publications, Pvt Ltd, New Delhi.
9. Subba Rao.P, International Business Text and cases, HPH Mumbai.
10. Bhalla.T.K, International Business, Anmol Publication, New Delhi.

**THIRUVALLUVAR UNIVERSITY**

**BACHELOR OF COMPUTER APPLICATIONS DEGREE COURSE**

**CBCS PATTERN**

**(With effect from 2022-2023 onwards)**

| S. No. | Part | Study Components | | Ins. Hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER I** | | | | | CIA | Uni. Exam | Total |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 6 | 4 | Programming in C | 25 | 75 | 100 |
| 4. | III | Core Practical | Practical-1 | 3 | 2 | Programming in C Lab | 25 | 75 | 100 |
| 5. | III | Allied -1 | Paper-1 | 7 | 3 | Mathematical Foundations - I | 25 | 75 | 100 |
| 6. | III | PE | Paper 1 | 6 | 3 | **Professional English I** | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental studies | 25 | 75 | 100 |
| | | Total | | 36 | 22 | | 175 | 525 | 700 |
| | | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| 10. | II | NMSDC I : Language Proficiency for Employability | Paper-1 | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-2 | 5 | 4 | C++ and Data Structures | 25 | 75 | 100 |
| 12. | III | Core Practical | Practical-2 | 2 | 2 | C++ and Data Structures Lab | 25 | 75 | 100 |
| 13. | III | Allied-1 | Paper-2 | 7 | 5 | Mathematical Foundations - II | 25 | 75 | 100 |
| 14. | III | PE | Paper 2 | 6 | 3 | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | Total | | 36 | 27 | | 200 | 600 | 800 |
| | | **SEMESTER III** | | | | | CIA | Uni. Exam | Total |
| 16. | I | Language | Paper-3 | 6 | 4 | Tamil / Other Languages | 25 | 75 | 100 |

| | | | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 17. | II | English | Paper-3 | 6 | 4 | English | | 25 | 75 | 100 |
| 18. | III | Core Theory | Paper-3 | 3 | 4 | Programming in JAVA | | 25 | 75 | 100 |
| 19. | III | Core Practical | Practical-3 | 3 | 3 | Programming in JAVA Lab | | 25 | 75 | 100 |
| 20. | III | ALLIED-2 | Paper-3 | 7 | 3 | Financial Accounting-I | | 25 | 75 | 100 |
| 21. | IV | Skill based Subject I | Paper-1 | 3 | 2 | Web Technology | | 25 | 75 | 100 |
| 22. | IV | Non-Major Elective | Paper-1 | 2 | 2 | Introduction to Information Technology | | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **22** | | | **175** | **525** | **700** |

| | | | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **SEMESTER IV** | | | | | | | | |
| 23. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | | 25 | 75 | 100 |
| 24. | II | English | Paper-4 | 6 | 4 | English | | 25 | 75 | 100 |
| 25. | III | Core Theory | Paper-6 | 3 | 4 | Relational Database Management Systems | | 25 | 75 | 100 |
| 26. | III | Core Practical | Practical-4 | 3 | 3 | RDBMS Lab | | 25 | 75 | 100 |
| 27. | III | ALLIED-2 | Paper-4 | 7 | 5 | Financial Accounting-II | | 25 | 75 | 100 |
| 28. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | | 25 | 75 | 100 |
| 29. | IV | Non-Major Elective | Paper-2 | 2 | 2 | Internet Technology | | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **24** | | | **175** | **525** | **700** |

| | | | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **SEMESTER V** | | | | | | | | |
| 30. | III | Core Theory | Paper-9 | 6 | 4 | Mobile Application Development | | 25 | 75 | 100 |
| 31. | III | Core Theory | Paper-10 | 6 | 4 | Operating System | | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper –11 | 4 | 2 | Design and Analysis of Algorithms | | 25 | 75 | 100 |
| 33. | III | Core Practical | Practical-5 | 4 | 3 | Mobile Applications Development-Lab | | 25 | 75 | 100 |

| 34. | III | Core Practical | Practical-6 | 4 | 3 | Operating System-Lab | 25 | 75 | 100 |
|---|---|---|---|---|---|---|---|---|---|
| 35. | III | Internal Elective I | Paper-1 | 3 | 3 | **(Choose any one)**<br>A. Data Mining<br>B. Information Security<br>C. Software Testing | 25 | 75 | 100 |
| 36. | IV | Skill Based Subject III | Paper– 2 | 3 | 2 | Software Engineering | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **21** | | **175** | **525** | **700** |

| SEMESTER VI | | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| 37. | III | Core Theory | Paper-12 | 5 | 4 | Open Source Software | 25 | 75 | 100 |
| 38. | III | Core Theory | Paper-13 | 4 | 4 | Python programming | 25 | 75 | 100 |
| 39. | III | Core Practical | Practical-7 | 4 | 2 | Python programming Lab | 25 | 75 | 100 |
| 40. | III | Core Practical | Practical-8 | 4 | 2 | Open Source Programming - Lab | 25 | 75 | 100 |
| 41. | III | Core Project | | 5 | 5 | Group/ Individual Project Work | 25 | 75 | 100 |
| 42. | III | Internal Elective II | Paper-2 | 3 | 3 | **(Choose any one)**<br>1. Big Data Analytics<br>2. Cryptography<br>3. Digital Image Processing | 25 | 75 | 100 |
| 43. | III | Internal Elective III | Paper-3 | 3 | 3 | **(Choose any one)**<br>1.Artificial Intelligence<br>2. System Software<br>3. Mobile Computing | 25 | 75 | 100 |
| **44.** | **III** | **NMSDC III :**<br>**Emerging Technology for Employability II** | **Paper-3** | **2** | **2** | **(Choose any one)**<br>**• PBL Android App Development**<br>**• Machine Learning** | **25** | **75** | **100** |
| 45. | V | Extension Activities | | 0 | 1 | | 100 | 0 | 100 |
| | | **Sem. Total** | | **30** | **26** | | **300** | **600** | **900** |
| | | | | | **142** | | | | **4500** |

# THIRUVALLUVAR UNIVERSITY, VELLORE – 632 115
## (B.COM – GENERAL) – 2022-2023 onwards

## The Course of Study and the Scheme of Examinations

| S.NO. | Part | Study Components / Course Title | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks CIA | Maximum Marks Uni. Exam | Maximum Marks Total |
|---|---|---|---|---|---|---|---|---|---|
| | | **SEMESTER I** | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | Financial Accounting -I | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 5 | 3 | Business Organization | 25 | 75 | 100 |
| 5. | III | ALLIED -1 | Paper-1 | 6 | 3 | **(to choose 1 out of 3)** 1. Indian Economy I 2. Elements of Insurance 3. Consumerism | 25 | 75 | 100 |
| 6. | III | PE | Paper-1 | 6 | 3 | **Professional English I** | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental Studies | 25 | 75 | 100 |
| | | | | 36 | 22 | | 175 | 525 | 700 |
| | | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 10. | II | **NMSDC I : Language Proficiency for Employability** | **Paper-1** | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | Financial Accounting –II | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 4 | 3 | Office management | 25 | 75 | 100 |
| 13. | III | ALLIED-1 | Paper-2 | 6 | 5 | **(to choose 1 out of 3)** 1. Indian Economy II 2. Merchant banking 3. Business Mathematics | 25 | 75 | 100 |
| 14. | III | PE | Paper-2 | 6 | 3 | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | | | 36 | 27 | | 200 | 600 | 800 |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER III** | | | | | CIA | Uni. Exam | Total |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil / Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-5 | 4 | 4 | Corporate Accounting I | 25 | 75 | 100 |
| 20. | III | Core Theory | Paper-6 | 3 | 3 | Legal Aspects of Business | 25 | 75 | 100 |
| 21. | III | ALLIED-2 | Paper-3 | 6 | 3 | Business Economics I | 25 | 75 | 100 |
| 22. | IV | Skill based Subject | Paper-1 | 3 | 2 | Computer Applications in Business | 25 | 75 | 100 |
| 23. | IV | Non-major elective | Paper-1 | 2 | 2 | General commercial Knowledge | 25 | 75 | 100 |
| | | | | **30** | **22** | | **175** | **525** | **700** |
| | | | | | | | | | |
| | | **SEMESTER IV** | | | | | CIA | Uni. Exam | Total |
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-9 | 4 | 4 | Corporate Accounting II | 25 | 75 | 100 |
| 27. | III | Core Theory | Paper-10 | 4 | 2 | Business Management | 25 | 75 | 100 |
| 28. | III | ALLIED-2 | Paper-4 | 6 | 5 | Business Economics II | 25 | 75 | 100 |
| 29. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 30. | IV | Non-major elective | Paper-2 | 2 | 2 | Advertisement and Salesmanship | 25 | 75 | 100 |
| | | | | **29** | **23** | | **175** | **525** | **700** |
| | | | | | | | | | |
| | | **SEMESTER V** | | | | | CIA | Uni. Exam | Total |
| 31. | III | Core Theory | Paper-13 | 6 | 4 | Cost accounting I | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-14 | 5 | 4 | Practical Auditing | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-15 | 6 | 5 | Management Accounting | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper-16 | 6 | 4 | Income Tax Law and Practice I | 25 | 75 | 100 |
| 35. | III | Elective | Paper-1 | 4 | 3 | (to choose 1 out of 3) 1. Entrepreneurial Development 2. Business Environment 3. Management Information System | 25 | 75 | 100 |
| 36. | IV | Skill based Subject | Paper-2 | 3 | 2 | Principles of marketing | 25 | 75 | 100 |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
| | | Course Title | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 30 | 22 | | 150 | 450 | 600 |
| | | | | | | | | | |
| | | SEMESTER VI | | | | | CIA | Uni. Exam | Total |
| 37. | III | Core Theory | Paper-17 | 5 | 4 | Cost accounting II | 25 | 75 | 100 |
| 38. | III | Core Theory | Paper-18 | 5 | 4 | Income Tax law and practice II | 25 | 75 | 100 |
| 39. | III | Core Theory | Paper-19 | 5 | 4 | Financial management | 25 | 75 | 100 |
| 40. | III | Compulsory Project | Paper-20 | 5 | 5 | Individual / Group Project | 25 | 75 | 100 |
| 41. | III | Elective | Paper-2 | 4 | 3 | (To choose one out of 3) 1. Innovation management 2. Logistics management 3. Service Marketing | 25 | 75 | 100 |
| 42. | III | Elective | Paper-3 | 4 | 3 | (To choose one out of 3) 1. Customs and GST 2. Investment Management 3. Financial services | 25 | 75 | 100 |
| 43. | III | NMSDC III : Digital banking and Audit Essentials for Employability | Paper-3 | 2 | 2 | Fintech Course | 25 | 75 | 100 |
| 44. | V | Extension Activities | | 0 | 1 | | 100 | - | 100 |
| | | | | 30 | 26 | | 275 | 525 | 800 |
| | | TOTAL | | | 142 | | | | |

# THIRUVALLUVAR UNIVERSITY
# BACHELOR OF ARTS
# BACHELOR OF SOCIAL WORK (BSW)
# DEGREE COURSE
# CBCS PATTERN
# (With effect from 2022-2023)

## The Course of Study and the Scheme of Examinations

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| SEMESTER I | | | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | Communicative English I | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | Introduction to Social Work | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 5 | 3 | Indian Social problems | 25 | 75 | 100 |
| 5. | III | ALLIED -1 | Paper-1 | 6 | 3 | Sociology for Social Work Practice | 25 | 75 | 100 |
| 6. | III | PE | Paper-1 | 6 | 3 | Professional English I | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental Studies | 25 | 75 | 100 |
| | | | | 36 | 22 | | 175 | 525 | 700 |
| | | | | | | | | | |
| SEMESTER II | | | | | | | | | |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | Communicative English II | 25 | 75 | 100 |
| 10. | II | NMSDC I : Language Proficiency for Employability | Paper-1 | 2 | 2 | Effective English | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | Psychology for Social Work Practice | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 4 | 3 | Social Work with Individuals | 25 | 75 | 100 |
| 13. | III | ALLIED-1 | Paper-2 | 6 | 5 | Fundamentals of Nutrition | 25 | 75 | 100 |
| 14. | III | PE | Paper-2 | 6 | 3 | Professional English II | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | | | 36 | 27 | | | | |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER III** | | | | | CIA | Uni. Exam | Total |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-5 | 4 | 4 | Social Legislations | 25 | 75 | 100 |
| 20. | III | Core Theory | Paper-6 | 4 | 4 | Social Work with Groups | 25 | 75 | 100 |
| 21. | III | Allied | Paper-2 | 6 | 3 | Women and Development | 25 | 75 | 100 |
| 22. | IV | Skill Based Subject | Paper-1 | 2 | 2 | Disaster Management | 25 | 75 | 100 |
| 23. | IV | Non-Major Elective | Paper-1 | 2 | 2 | Professional Skill Development | 25 | 75 | 100 |
| | | | | 30 | 23 | | 175 | 525 | 700 |
| | | | | | | | | | |
| | | **SEMESTER IV** | | | | | | | |
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 26. | III | Core Practical | Practical-1 | 3 | 3 | Concurrent Field Wok- I | 40 | 60 | 100 |
| 27. | III | Core Theory | Paper-7 | 3 | 3 | Social Work in Hospitals | 25 | 75 | 100 |
| 28. | III | Core Theory | Paper-8 | 3 | 3 | Social Work with Communities | 25 | 75 | 100 |
| 29. | III | Allied | Paper-2 | 5 | 5 | Demography and Population Dynamics | 25 | 75 | 100 |
| 30. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 31. | IV | Non Major Elective | Paper-2 | 2 | 2 | Basic Skills in Counselling | 25 | 75 | 100 |
| | | | | 30 | 26 | | 215 | 585 | 800 |
| | | | | | | | | | |
| | | **SEMESTER V** | | | | | CIA | Uni. Exam | Total |
| 32. | III | Core Theory | Paper-9 | 6 | 4 | Fundamentals of Social Work Research | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-10 | 6 | 4 | Social Welfare Administration | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper-11 | 6 | 4 | Entrepreneurship Development | 25 | 75 | 100 |
| 35. | III | Core Theory | Paper-12 | 5 | 3 | Family and Child Welfare | 25 | 75 | 100 |
| 36. | III | Internal Elective | Paper-1 | 4 | 3 | Development Communication | 25 | 75 | 100 |
| 37. | IV | Skill Based Subject | Paper-2 | 3 | 2 | Project Management | 25 | 75 | 100 |
| | | | | 30 | 20 | | 150 | 450 | 600 |
| | | | | | | | | | |
| | | **SEMESTER VI** | | | | | CIA | Uni. Exam | Total |
| 38. | III | Core Theory | Paper-13 | 6 | 3 | Social Work in Industries | 25 | 75 | 100 |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| 39. | III | Core Theory | Paper-14 | 5 | 3 | Correctional Social Work | 25 | 75 | 100 |
| 40. | III | Core Practical | Practical-2 | 5 | 4 | Concurrent Field Work - II | 40 | 60 | 100 |
| 41. | III | Compulsory Project | Project | 5 | 5 | Compulsory-Project | 25 | 75 | 100 |
| 42. | III | Internal Elective | Paper-2 | 3 | 3 | Human Rights | 25 | 75 | 100 |
| 43. | III | Internal Elective | Paper-3 | 3 | 3 | Social Work Among Those Differently Abled | 25 | 75 | 100 |
| 44. | IV | Skill Based Subject | Paper-3 | 3 | 2 | Fundamentals of Accounting | 25 | 75 | 100 |
| 45. | V | Extension Activities | | 0 | 1 | | 100 | - | 100 |
| 46. | | | | 0 | 0 | Block Field work(optional) | | | |
| 47. | | NMSDC III : Employability Readiness | | 0 | 0 | (choose any one) • Naandi • Unnati • Quest • Izpay • IBM Skills build | - | - | |
| | | | | 30 | 24 | | 290 | 510 | 800 |
| | | | | | 142 | | | | 4500 |
| | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CO3 | S | S | M | S | M | S | M | S | S | M | M |
| CO4 | M | S | M | S | M | S | M | S | M | S | S |
| CO5 | S | M | S | M | S | M | S | S | M | S | S |

| Course Code | Semester VI | Human rights | | L | T | P | C |
|---|---|---|---|---|---|---|---|
| Paper type | INTERNAL ELECTIVE PAPER - 2 | | | 4 | - | - | 3 |

**Course Objectives:**

The main objectives of this course are to :

| 1 | Understand the concept of Human Rights, its evaluation at the International level as well as in India and impact of the society. |
|---|---|
| 2 | Develop ability to understand areas of Human Rights and acquaintance with Human Rights machinery and their functions. |
| 3 | To help students understand the concept of human rights and its significance to the Social Work profession |
| 4 | To sensitize students for the application of human rights to the various practice domains of the profession |
| 5 | To develop Understanding on Human Right based Social Work interventions |

**Expected course outcomes:**

On the successful completion of the course, students will be able to:

| Unit I: | Define human rights | K1 |
|---|---|---|
| | Explain the types of human rights | K2 |
| | Acquire the knowledge of scope of human rights | K3 |

| | Study about the history of human rights | K4 |
|---|---|---|
| | Analysis the need of the study of human rights in social work profession | K5 |
| Unit II | Explain the need of the universal declaration of human rights | K1 |
| | Acquire the knowledge about concept of fundamental rights in Indian constitution | K2 |
| | Recall about universal declaration of human rights | K3 |
| | Find out the importance of the study in social work profession | K4 |
| | Explain the significant of need of human rights in India | K5 |
| Unit III | Define DPSP | K1 |
| | Explain the sources of DPSP | K2 |
| | Acquire the knowledge of directive principles of state policy | K3 |
| | Justify the importance and functional DPSP in Indian constitution | K4 |
| | Recall about DPSP | K5 |
| Unit IV | Explain the importance of violation of human rights | K1 |
| | Acquire the knowledge about the need about dalits rights | K2 |
| | Explain the violation of human rights on women | K3 |
| | Summarize the importance of human rights of children | K4 |
| | Recall about DPSP | K1 |
| Unit V | Define human rights | K1 |
| | Explain the importance of human rights in international and national level | K2 |
| | Identify the need of the study in reducing crimes | K3 |
| | Justify about national human rights commission | K4 |
| | Study about the power and functions of human rights commission | K3 |
| | | P4 |

**Matching Table**

| | i. Remembering | ii. Understanding | iii. Applying | iv.Analysing | V.Evaluating | vi.Creating |
|---|---|---|---|---|---|---|
| UnitI | Yes | Yes | Yes | Yes | No | No |
| Unit II | Yes | Yes | Yes | yes | No | No |

| Course Code | Semester VI | SOCIAL WORK AMONG THOSE DIFFERNTLY ABLED | L | T | P | C |
|---|---|---|---|---|---|---|
| Paper type | INTERNAL ELECTIVE PAPER - 3 | | 4 | - | - | 3 |

**Course Objectives:**

The main objectives of this course are to :

| 1 | To understand the concepts disability and its types. |
|---|---|
| 2 | To understand the causes and legal approaches for the welfare of person with disabilities. |
| 3 | To understand concepts and models of disability. |
| 4 | To understand issues and challenges faced by disabled |
| 5 | To understand policies, programmes and legislation pertaining to disability |

**Expected course outcomes:**

On the successful completion of the course, students will be able to:

| Unit I: | Define disability | K1 |
|---|---|---|
| | Define impairment | K2 |
| | Acquire the knowledge of types of disabilities | K3 |
| | Study about social work intervention with disabled | K4 |
| | Analysis the concept of visually , hearing ,mentally handicapped | K5 |

| Unit II | Explain the need of study in social work profession | K1 |
| | Acquire the knowledge about causes of disabilities | K2 |
| | Find out the meaning about malnutrition, vitamin deficiencies , accidents | K3 |
| | Find out the importance of the genetically disorder | K4 |
| | Explain the significant of deformities | K5 |
| Unit III | Define PWD | K1 |
| | Explain the person with disability act | K2 |
| | Acquire the knowledge of appointments of state commissioners for disabilities | K3 |
| | Justify the importance and functional the PWD act | K4 |
| | Recall about PWD | K5 |
| Unit IV | Explain the importance of government scheme for PWD | K1 |
| | Acquire the knowledge about the need of special education under persons with disability | K2 |
| | Explain the role of social worker working with PWD | K3 |
| | Summarize the benefits different media in public relation | K4 |
| | Recall the importance of government scheme for PWD | K1 |
| Unit V | Define rehabilitation | K1 |
| | Explain the importance of rehabilitation programmes | K2 |
| | Identify the need and function of NGOs working with persons with disabilities | K3 |
| | Justify about role of family in the treatment for disabilities | K4 |
| | Study about rehabilitation for community based , out reach programmes working with PWD | K3 |
| | | P4 |

**Matching Table**

| | i. Remembering | ii. Understanding | iii. Applying | iv.Analysing | V.Evaluating | vi.Creating |
|---|---|---|---|---|---|---|
| UnitI | Yes | Yes | Yes | Yes | No | No |

# THIRUVALLUVAR UNIVERSITY

## BACHELOR OF SCIENCE
## B.Sc., BOTANY
### UNDER CBCS (With effect from 2022 - 2023)

### The Course of Study and the Scheme of Examinations

| S. No. | Part | Study Components / Course Title | | Ins. Hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER I** | | | | | CIA | Uni. Exam | Total |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 6 | 4 | Phycology and Mycology | 25 | 75 | 100 |
| | III | Core Practical | Practical-1 | 4 | 0 | | 0 | 0 | 0 |
| 4. | III | Allied -1 | Paper-1 | 4 | 3 | (To Choose 1 out of 2) 1. Zoology I 2. Chemistry I | 25 | 75 | 100 |
| | III | Allied- 1 | Practical-1 | 2 | 0 | | 0 | 0 | 0 |
| **5.** | III | **PE** | **Paper 1** | **6** | **3** | **Professional English I** | **25** | **75** | **100** |
| 6. | IV | Environmental Studies | | 2 | 2 | Environmental studies | 25 | 75 | 100 |
| | | **Sem. Total** | | **36** | **20** | | **150** | **450** | **600** |
| | | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| 7. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 8. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| 9. | II | **NMSDC I : Language Proficiency for Employability** | **Paper-1** | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 10. | III | Core Theory | Paper-2 | 5 | 4 | Microbiology, Lichens, Bryology and Plant Pathology | 25 | 75 | 100 |
| 11. | III | Core Practical | Practical-1 | 3 | 2 | Covering Papers 1 and 2 | 25 | 75 | 100 |
| 12. | III | Allied-1 | Paper-2 | 4 | 3 | (To Choose 1 out of 2) 1. Zoology II 2. Chemistry II | 25 | 75 | 100 |
| 13. | III | Allied Practical - 1 | Practical-1 | 2 | 2 | Zoology | 25 | 75 | 100 |
| **14.** | III | **PE** | **Paper 1** | **6** | **3** | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | **Sem. Total** | | **36** | **27** | | **225** | **675** | **900** |

| S.NO | Part | Study Components Course Title | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|------|------|------|------|------|------|------|------|------|------|

## SEMESTER III

| S.NO | Part | Study Components Course Title | | Ins. hrs /week | Credit | Title of the Paper | CIA | Uni. Exam | Total |
|------|------|------|------|------|------|------|------|------|------|
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-3 | 4 | 5 | Pteridology, Gymnosperms and Paleobotany | 25 | 75 | 100 |
| | III | Core Practical | Practical-2 | 3 | 0 | | 0 | 0 | 0 |
| 20. | III | ALLIED-2 | Paper-3 | 4 | 3 | (To Choose 1 out of 2) 1. Zoology I 2. Chemistry I | 25 | 75 | 100 |
| | III | Allied Practical | Practical-2 | 3 | 0 | | 0 | 0 | 0 |
| 21. | IV | Skill based Subject | Paper-1 | 2 | 2 | Horticulture | 25 | 75 | 100 |
| 22. | IV | Non-major elective | Paper-1 | 2 | 2 | Medicinal Botany | 25 | 75 | 100 |
| | | | | 30 | 20 | | 150 | 450 | 600 |

## SEMESTER IV

| S.NO | Part | Study Components Course Title | | Ins. hrs /week | Credit | Title of the Paper | CIA | Uni. Exam | Total |
|------|------|------|------|------|------|------|------|------|------|
| 23. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 24. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 25. | III | Core Theory | Paper-4 | 4 | 5 | Plant Cell Biology | 25 | 75 | 100 |
| 26. | III | Core Practical | Practical-2 | 3 | 3 | Covering Papers 3 and 4 | 25 | 75 | 100 |
| 27. | III | ALLIED-2 | Paper-4 | 4 | 3 | (To Choose 1 out of 2) 1. Zoology II 2. Chemistry II | 25 | 75 | 100 |
| 28. | III | Allied Practical-2 | Practical-2 | 3 | 2 | | 25 | 75 | 100 |
| 29. | IV | **NMSDC II : Digital Skills for Employability** | **Paper-2** | **2** | **2** | **Office Fundamentals** | 25 | 75 | 100 |
| 30. | IV | Non-major elective | Paper-2 | 2 | 2 | Horticulture | 25 | 75 | 100 |
| | | | | 30 | 25 | | 200 | 600 | 800 |

## SEMESTER V

| S.NO | Part | Study Components Course Title | | Ins. hrs /week | Credit | Title of the Paper | CIA | Uni. Exam | Total |
|------|------|------|------|------|------|------|------|------|------|
| 31. | III | Core Theory | Paper-5 | 6 | 5 | Anatomy and Embryology of Angiosperms | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-6 | 6 | 5 | Morphology and Taxonomy of Angiosperms & Economic Botany | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-7 | 6 | 5 | Genetics, Plant Breeding, Evolution and Biostatistics | 25 | 75 | 100 |
| | III | Core Practical | Practical-3 | 3 | 0 | | 0 | 0 | 0 |
| | III | Core Practical | Practical-4 | 3 | 0 | | 0 | 0 | 0 |
| 34. | III | Internal Elective | Paper-1 | 3 | 3 | A. Tissue Culture B. Mass Cultivation of Algae C. Bio safety and Bioethics | 25 | 75 | 100 |
| 35. | IV | Skill based Subject | Paper-2 | 3 | 2 | Ethno Botany and Herbal Medicines | 25 | 75 | 100 |
| | | | | 30 | 20 | | 125 | 375 | 500 |

| | | | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **SEMESTER VI** | | | | | | | | | | |
| 36. | III | Core Theory | Paper-8 | 5 | 5 | Plant Physiology and Plant Biochemistry | | 25 | 75 | 100 |
| 37. | III | Core Theory | Paper-9 | 5 | 5 | Ecology, Phytogeography and Toxicology | | 25 | 75 | 100 |
| 38. | III | Core Practical | Practical-3 | 3 | 3 | Covering Papers 5, 6 & 7 | | 25 | 75 | 100 |
| 39. | III | Core Practical | Practical-4 | 3 | 3 | Covering Papers 8 & 9 | | 25 | 75 | 100 |
| 40. | III | Core Project | Project – 1 | 5 | 5 | **(Individual / Group Project)** | | 25 | 75 | 100 |
| 41. | III | Internal Elective | Paper-2 | 3 | 3 | (to choose one out of 3)<br>A.  Plant Biotechnology<br>B.  Bio fertilizers<br>C.  Postharvest Technology | | 25 | 75 | 100 |
| 42. | III | Internal Elective | Paper-3 | 3 | 3 | (to choose one out of 3)<br>A.  Fermentation Technology<br>B.  Computer Application in Botany<br>C.  Forestry | | 25 | 75 | 100 |
| 43. | III | NMSDC III : Medical Coding for Employability | Paper-3 | 2 | 2 | Medical Coding | | 25 | 75 | 100 |
| 44. | V | Extension Activities | | - | 1 | | | 100 | 0 | 100 |
| | | | | 30 | 30 | | | 300 | 600 | 900 |
| | | | | | 142 | | | | | 4300 |

3

# THIRUVALLUVAR UNIVERSITY
## BACHELOR OF SCIENCE
## B.Sc. CHEMISTRY DEGREE COURSE
### (With effect from 2022 - 2023)
## The Course of Study and the Scheme of Examinations

| S. No. | Part | Study Components | | Ins. Hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|--------|------|---------|-------|---------------|--------|-------------------|-----|-----------|-------|
| | | Course Title | | | | | CIA | Uni. Exam | Total |
| | | SEMESTER I | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 6 | 4 | General Chemistry - I | 25 | 75 | 100 |
| | III | Core Practical | Practical-1 | 3 | 0 | Volumetric Analysis | 0 | 0 | 0 |
| 4. | III | Allied -1 | Paper-1 | 4 | 3 | (Choose any 1 out of 5)<br>1. Physics I<br>2. Botany I<br>3. Zoology I<br>4. Biochemistry I<br>5. Mathematics I* | 25 | 75 | 100 |
| | III | Allied- 1 | Practical-1 | 3 | 0 | | 0 | 0 | 0 |
| **5.** | III | **PE** | **Paper 1** | **6** | **3** | **Professional English I** | **25** | **75** | **100** |
| 6. | IV | Environmental Studies | | 2 | 2 | Environmental studies | 25 | 75 | 100 |
| | | Sem. Total | | 36 | 20 | | 150 | 450 | 600 |
| | | SEMESTER II | | | | | | | |
| 7. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 8. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| 9. | II | NMSDC I : Language Proficiency for Employability | Paper-1 | 2 | 2 | Effective English | 25 | 75 | 100 |
| 10. | III | Core Theory | Paper-2 | 5 | 4 | General Chemistry - II | 25 | 75 | 100 |
| 11. | III | Core Practical | Practical-1 | 3 | 2 | Volumetric Analysis | 25 | 75 | 100 |
| 12. | III | Allied-1 | Paper-2 | 3 | 3 | (Choose any 1 out of 5)<br>1. Physics II<br>2. Botany II<br>3. Zoology II<br>4. Biochemistry II<br>5. Mathematics II* | 25 | 75 | 100 |
| 13. | III | Allied Practical - 1 | Practical-1 | 3 | 2 | | 25 | 75 | 100 |
| **14.** | III | **PE** | **Paper 1** | **6** | **3** | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | | 25 | 75 | 100 |
| | | Sem. Total | | 36 | 27 | | 225 | 675 | 900 |

| S.NO. | Part | Study Components / Course Title | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER III** | | | | | | | CIA | Uni. Exam | Total |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil / Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-3 | 5 | 4 | General Chemistry – III | 25 | 75 | 100 |
| | III | Core Practical | Practical-2 | 3 | 0 | Inorganic Qualitative Analysis & Preparations | 0 | 0 | 0 |
| 20. | III | ALLIED-2 | Paper-3 | 3 | 3 | Any one from<br>1. Physics –I<br>2. Botany –I<br>3. Zoology –I<br>4. Biochemistry – I<br>5. Mathematics - I* | 25 | 75 | 100 |
| | III | Allied Practical | Practical-2 | 3 | 0 | practical-II | 0 | 0 | 0 |
| 21. | IV | Skill Based Subject | Paper-1 | 2 | 2 | Water Treatment and Analysis | 25 | 75 | 100 |
| 22. | IV | Non-Major Elective | Paper-1 | 2 | 2 | Medicinal Chemistry | 25 | 75 | 100 |
| | | | | **30** | **19** | | **150** | **450** | **600** |
| **SEMESTER IV** | | | | | | | CIA | Uni. Exam | Total |
| 23. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 24. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 25. | III | Core Theory | Paper-4 | 5 | 4 | General Chemistry - IV | 25 | 75 | 100 |
| 26. | III | Core Practical | Practical-2 | 3 | 3 | Inorganic Qualitative Analysis & Preparations | 25 | 75 | 100 |
| | III | Allied-2 | Paper-4 | 3 | 3 | Any one from<br>1.Physics -II<br>2.Botany -II<br>3.Zoology -II<br>4.Biochemistry - II<br>5.Mathematics - II* | 25 | 75 | 100 |
| 27. | III | Allied Practical | Practical-2 | 3 | 2 | Allied practical-II | 25 | 75 | 100 |
| 28. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | | 25 | 75 | 100 |
| 29. | IV | Non-Major Elective | Paper-2 | 2 | 2 | Chemistry in Every Day Life | 25 | 75 | 100 |
| | | | | **30** | **24** | | **200** | **600** | **800** |

| S.NO. | Part | Study Components Course Title | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER V** | | | | | CIA | Uni. Exam | Total |
| 30. | III | Core Theory | Paper-5 | 5 | 5 | Inorganic Chemistry - I | 25 | 75 | 100 |
| | III | Core Practical | Practical-3 | 3 | 0 | Gravimetric Estimation | 0 | 0 | 0 |
| 31. | III | Core Theory | Paper-6 | 5 | 5 | Organic Chemistry - I | 25 | 75 | 100 |
| | III | Core Practical | Practical-4 | 3 | 0 | Organic Analysis and Preparations | 0 | 0 | 0 |
| 32. | III | Core Theory | Paper-7 | 5 | 4 | Physical Chemistry - I | 25 | 75 | 100 |
| 33. | III | Internal Elective | Paper-1 | 3 | 3 | **Any one from** A. Analytical chemistry - I B. Basis of computer programming in C and its applications in Chemistry c. Organic Synthesis | 25 | 75 | 100 |
| 34. | | Core Practical | Practical - 5 | 3 | 0 | Physical Chemistry Practical | 0 | 0 | 0 |
| 35. | IV | Skill Based Subject | Paper-2 | 3 | 2 | Applied Chemistry | 25 | 75 | 100 |
| | | | | 30 | 19 | | 150 | 450 | 600 |
| | | **SEMESTER VI** | | | | | CIA | Uni. Exam | Total |
| 36. | III | Core Theory | Paper-8 | 5 | 4 | Inorganic Chemistry - II | 25 | 75 | 100 |
| 37. | III | Core Theory | Paper-9 | 5 | 4 | Organic Chemistry - II | 25 | 75 | 100 |
| 38. | III | Core Theory | Paper-10 | 5 | 4 | Physical Chemistry - II | 25 | 75 | 100 |
| 39. | | Compulsory Project | | 0 | 5 | | 25 | 75 | 100 |
| 40. | III | Core Practical-3 | Practical-3 | 3 | 2 | Gravimetric Estimation | 25 | 75 | 100 |
| 41. | III | Core Practical-4 | Practical-4 | 3 | 2 | Organic Analysis and Preparations | 25 | 75 | 100 |
| 42. | III | Core Practical-5 | Practical-5 | 3 | 3 | Physical Chemistry Experiments | 25 | 75 | 100 |
| 43. | III | Internal Elective | Paper-2 | 2 | 3 | **Any one from** A. Analytical Chemistry-II B. Textile Chemistry C. Nano Chemistry | 25 | 75 | 100 |
| 44. | III | Internal Elective | Paper-3 | 2 | 3 | **Any one from** A. Pharmaceutical Chemistry B. Polymer Chemistry C. Green Chemistry Agriculture and Leather Chemistry | 25 | 75 | 100 |

| 45. | III | Skill based Subject | Paper-3 | 2 | 2 | | 25 | 75 | 100 |
| 46. | IV | Extension Activities | | 0 | 1 | | 100 | 0 | 100 |
| 47 | | **NMSDC III : Employability Readiness** | **-** | **0** | **0** | **(choose any one)**<br>**• Naandi**<br>**• Unnati**<br>**• Quest**<br>**• Izpay**<br>**• IBM Skills build** | **0** | **0** | **0** |
| | | **TOTAL** | | **30** | **33** | | **350** | **750** | **1100** |

* **Allied Mathematics**:

| | Ins. Hrs/Week | Credit | CIA | University | Total Marks |
|---|---|---|---|---|---|
| Paper-1 | 7 | 4 | 25 | 75 | 100 |
| Paper-2 | 7 | 6 | 25 | 75 | 100 |

**#** if Mathematics is one of the Allied Subjects total no. of papers will be 44.

# THIRUVALLUVARUNIVERSITY

# B.Sc. COMPUTER SCIENCE

## CBCS PATTERN

### (With effect from 2022-2023)

| S. No. | Part | Study Components Course Title | | Ins. Hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER I** | | | | | CIA | Uni. Exam | Total |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 6 | 4 | Programmingin C | 25 | 75 | 100 |
| 4. | III | Core Practical | Practical-1 | 3 | 2 | Programmingin CLab | 25 | 75 | 100 |
| 5. | III | Allied -1 | Paper-1 | 7 | 3 | **(tochooseanyone)** 1. MathematicsI 2. Mathematical FoundationsI | 25 | 75 | 100 |
| 6. | III | PE | Paper 1 | 6 | 3 | Professional English I | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental studies | 25 | 75 | 100 |
| | | **Sem. Total** | | 36 | 22 | | 175 | 525 | 700 |
| | | | | | | | | | |
| | | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| 10. | II | **NMSDC I : Language Proficiency for Employability** | Paper-1 | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-2 | 5 | 4 | C++& Data Structure | 25 | 75 | 100 |
| 12. | III | Core Practical | Practical-2 | 2 | 2 | C++ and Data Structures Lab | 25 | 75 | 100 |
| 13. | III | Allied-1 | Paper-2 | 7 | 5 | **(tochooseanyone)** 1. MathematicsII 2. Mathematical FoundationsII | 25 | 75 | 100 |
| **14.** | **III** | **PE** | **Paper 1** | **6** | **3** | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | **Sem. Total** | | 36 | 27 | | 200 | 600 | 800 |
| | | | | | | | | | |

| S.NO. | Part | Study Components | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | **Course Title** | | | | | CIA | Uni. Exam | Total |
| **SEMESTER III** | | | | | | | CIA | Uni. Exam | Total |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil/ OtherLanguages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-3 | 3 | 3 | Programming in JAVA | 25 | 75 | 100 |
| 20. | III | Core Practical | Practical-3 | 3 | 3 | Programming in JAVA Lab | 25 | 75 | 100 |
| 21. | III | Allied II | Paper-3 | 4 | 3 | ( Choose any one)<br>1. Physics I<br>2. Statistical Methods and Their Applications I | 25 | 75 | 100 |
| | III | Allied II | Practical | 3 | 0 | Physics/Statistics Practical | 0 | 0 | 0 |
| 22. | IV | Skill Based Subject | Paper-1 | 3 | 2 | Digital Logic Design and Computer Organization | 25 | 75 | 100 |
| 23. | IV | Non-Major Elective | Paper-1 | 2 | 2 | Introduction to Information Technology | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **21** | | **175** | **525** | **700** |
| **SEMESTER IV** | | | | | | | CIA | Uni. Exam | Total |
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-4 | 3 | 3 | Relational Database Management Systems | 25 | 75 | 100 |
| 27. | III | Core Practical | Practical-4 | 3 | 3 | RDBMS Lab | 25 | 75 | 100 |
| 28. | III | Allied II | Paper-4 | 4 | 3 | (to choose any one)<br>1. Physics II<br>2. Statistical Methods and their Applications II | 25 | 75 | 100 |
| 29. | III | Allied II | Practical | 3 | 2 | Physics/Statistics Practical | 25 | 75 | 100 |
| 30. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 3 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 31. | IV | Non-Major Elective | Paper-2 | 2 | 2 | Internet Technology | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **23** | | **200** | **600** | **800** |

| S.NO. | Part | Study Components Course Title | | Ins. hrs /week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER V** | | | | | | | CIA | Uni. Exam | Total |
| 32. | III | Core Theory | Paper-5 | 6 | 4 | Mobile Application Development | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-6 | 6 | 4 | Operating System | 25 | 75 | 100 |
| 34. | III | Core Theory | Paper–7 | 4 | 3 | Design and Analysis of Algorithms | 25 | 75 | 100 |
| 35. | III | Core Practical | Practical-5 | 4 | 3 | Mobile Applications Development-Lab | 25 | 75 | 100 |
| 36. | III | Core Practical | Practical-6 | 4 | 3 | Operating System-Lab | 25 | 75 | 100 |
| 37. | III | Internal Elective | Paper-1 | 3 | 3 | **(tochooseanyone)** 1. Data Mining 2. Information Security 3. Software Testing | 25 | 75 | 100 |
| 38. | IV | Skill Based Subject | Paper-2 | 3 | 2 | Software Engineering | 25 | 75 | 100 |
| | | | | 30 | 22 | | 175 | 525 | 700 |
| | | | | | | | | | |
| **SEMESTER VI** | | | | | | | CIA | Uni. Exam | Total |
| 39. | III | Core Theory | Paper-8 | 5 | 4 | Open Source Software | 25 | 75 | 100 |
| 40. | III | Core Theory | Paper-9 | 4 | 4 | Python Programming | 25 | 75 | 100 |
| 41. | III | Core Practical | Practical-7 | 4 | 3 | Python Programming Lab | 25 | 75 | 100 |
| 42. | III | Core Practical | Practical-8 | 4 | 2 | Open Source Programming Lab | 25 | 75 | 100 |
| 43. | III | Project | | 5 | 5 | Project Work (Group/Individual Project) | 25 | 75 | 100 |
| 44. | III | Internal Elective | Paper - 2 | 3 | 3 | **(tochooseanyone)** 1. Big Data Analytics 2. Cryptography 3. Digital Image Processing | 25 | 75 | 100 |
| 45. | III | Internal Elective | Paper - 3 | 3 | 3 | **(tochooseanyone)** 1. Artificial Intelligence 2. System Software 3. Cloud Computing | 25 | 75 | 100 |

| 46. | IV | **NMSDC III : Emerging Technology for Employability -** | **Paper - 3** | **2** | **2** | **(Choose any one)**<br>**• PBL Android App Development**<br>**• Machine Learning** | **25** | **75** | **100** |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 47. | V | Extension Activities | | 0 | 1 | | 100 | 0 | 100 |
| | | **Sem. Total** | | **30** | **27** | | **300** | **600** | **900** |
| | | | | | **142** | | | | |

# THIRUVALLUVAR UNIVERSITY
## BACHELOR OF SCIENCE
## B.Sc. MATHEMATICS DEGREE COURSE
### (With effect from 2022 - 2023)
### The Course of Study and the Scheme of Examinations

| S. No. | Part | Study Components / Course Title | | Ins. Hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| | | **SEMESTER I** | | | | | | | |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | Communicative English I | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 5 | 3 | Algebra | 25 | 75 | 100 |
| 4. | III | Core Theory | Paper-2 | 5 | 3 | Trigonometry | 25 | 75 | 100 |
| 5. | III | Allied -1 | Paper-1 | 4 | 3 | (to choose any 1 out of 4) | 25 | 75 | 100 |
| | III | Allied- 1 | Practical-1 | 2 | 0 | (For Practical Allied subjects) | 0 | 0 | 0 |
| 6. | III | PE | Paper 1 | 6 | 3 | Professional English I | 25 | 75 | 100 |
| 7. | IV | Environmental Studies | | 2 | 2 | Environmental studies | 25 | 75 | 100 |
| | | Sem. Total | | 36 | 22 | | 175 | 525 | 700 |
| | | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| 8. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 9. | II | English (CE) | Paper-2 | 4 | 4 | Communicative English II | 25 | 75 | 100 |
| 10. | II | NMSDC I : Language Proficiency for Employability | Paper-1 | 2 | 2 | Effective English | 25 | 75 | 100 |
| 11. | III | Core Theory | Paper-3 | 4 | 3 | Calculus | 25 | 75 | 100 |
| 12. | III | Core Theory | Paper-4 | 4 | 3 | Analytical Geometry of three dimensions | 25 | 75 | 100 |
| 13. | III | Allied-1 | Paper-2 | 4 | 3 | (to choose any 1 out of 4) (For Practical Allied subjects) | 25 | 75 | 100 |
| 14. | III | Allied Practical – 1 | Practical-1 | 2 | 2 | (to choose any 1 out of 4) (For Practical Allied subjects) | 25 | 75 | 100 |
| 15. | III | PE | Paper 1 | 6 | 3 | Professional English II | 25 | 75 | 100 |
| 16. | IV | Value Education | | 2 | 2 | | 25 | 75 | 100 |
| 17. | IV | Soft Skill | | 2 | 1 | | 25 | 75 | 100 |
| | | Sem. Total | | 36 | 27 | | 250 | 750 | 1000 |
| | | **SEMESTER III** | | | | | | | |
| 18. | I | Language | Paper-3 | 6 | 4 | Tamil / Other Languages | 25 | 75 | 100 |
| 19. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 20. | III | Core Theory | Paper-5 | 6 | 5 | Differential Equations and Laplace Transforms | 25 | 75 | 100 |
| 21. | III | Allied-2 | Paper-3 | 4 | 3 | (to choose any 1 out of 4) (For Practical Allied subjects) | 25 | 75 | 100 |
| | III | Allied Practical – 2 | Practical-2 | 3 | 0 | | 0 | 0 | 0 |
| 22. | IV | Skill Based Subject | Paper-1 | 3 | 2 | Mathematics for competitive Examinations – I | 25 | 75 | 100 |
| 23. | IV | Non-Major Elective | Paper-1 | 2 | 2 | Basic Mathematics | 25 | 75 | 100 |
| | | Sem. Total | | 30 | 20 | | 150 | 450 | 600 |

| | | | | | | SEMESTER IV | | | |
|---|---|---|---|---|---|---|---|---|---|
| 24. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 25. | II | English | Paper-4 | 4 | 4 | English | 25 | 75 | 100 |
| 25. | III | Core Theory | Paper-6 | 4 | 4 | Vector Analysis and Fourier Series | 25 | 75 | 100 |
| 26. | III | Core Theory | Paper-7 | 5 | 4 | Statics | 25 | 75 | 100 |
| 27. | III | Allied-2 | Paper-4 | 4 | 3 | (to choose any 1 out of 4) (For Practical Allied subjects) | 25 | 75 | 100 |
| 28 | III | Allied Practical – 2 | Practical-2 | 3 | 2 | | 25 | 75 | 100 |
| 29. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 30. | IV | Non-Major Elective | Paper-2 | 2 | 2 | Foundation Mathematics for Competitive Examinations – I | 25 | 75 | 100 |
| | | Sem. Total | | 30 | 25 | | 200 | 600 | 800 |
| | | | | | | SEMESTER V | | | |
| 31. | III | Core Theory | Paper-8 | 6 | 4 | Abstract Algebra | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-9 | 6 | 4 | Real Analysis – I | 25 | 75 | 100 |
| 33. | III | Core Theory | Paper-10 | 6 | 4 | Dynamics | 25 | 75 | 100 |
| 34. | IV | Elective | Paper-1 | 5 | 3 | (to choose any 1 out of 2) 1.  Linear Programming 2.  Special Functions | 25 | 75 | 100 |
| 35. | IV | Elective | Paper-2 | 4 | 3 | (to choose any 1 out of 2) 1.Graph Theory 2. Discrete Mathematics | 25 | 75 | 100 |
| 36. | IV | Skill Based Subject | Paper-3 | 3 | 2 | Mathematics for Competitive Examinations – III | 25 | 75 | 100 |
| | | Sem. Total | | 30 | 20 | | 150 | 450 | 600 |
| | | SEMESTER VI | | | | | | | |
| 37. | III | Core Theory | Paper-11 | 5 | 4 | Linear Algebra | 25 | 75 | 100 |
| 38 | III | Core Theory | Paper-12 | 5 | 4 | Real Analysis II | 25 | 75 | 100 |
| 39. | III | Core Theory | Paper-13 | 5 | 4 | Complex Analysis | 25 | 75 | 100 |
| 40. | III | Compulsory Project | Project-1 | 3 | 5 | Group / Individual Project | 25 | 75 | 100 |
| 41. | III | Core Theory | Paper-14 | 3 | 3 | Programming in C Language | 25 | 75 | 100 |
| 42. | III | Core Practical | Practical-1 | 3 | 2 | C Language | 25 | 75 | 100 |
| 43. | IV | Elective | Paper-3 | 3 | 3 | (to choose any 1 out of 3) 1. Operations Research 2. Fuzzy Mathematics 3. R Programming (Practical Only) | 25 | 75 | 100 |
| 44. | III | NMSDC III : Data Analytics with Advanced Tools for Employability | Paper – 3 | 2 | 2 | Project based learning III | 25 | 75 | 100 |
| 45. | V | Extension Activities | | 0 | 1 | | 100 | 0 | 100 |
| | | Sem. Total | | 30 | 28 | | 300 | 600 | 900 |
| | | Grand Total | | | 142 | | | | 4500 |

# THIRUVALLUVAR UNIVERSITY

## BACHELOR OF SCIENCE
## B.Sc. PHYSICS
## DEGREE COURSE

## (With effect from 2022 - 2023)

## The Course of Study and the Scheme of Examinations

| S. No. | Part | Study Components / Course Title | | Ins. Hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER I** | | | | | | | CIA | Uni. Exam | Total |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 6 | 4 | Mechanics | 25 | 75 | 100 |
| | III | Core Practical | Paper-1 | 3 | 0 | | 0 | 0 | 0 |
| 4. | III | Allied -1 | Paper-1 | 4 | 3 | Chemistry I or Biochemistry I | 25 | 75 | 100 |
| | III | Allied Practical | Practical-1 | 3 | 0 | | 0 | 0 | 0 |
| **5.** | III | **PE** | **Paper 1** | 6 | 3 | **Professional English I** | 25 | 75 | 100 |
| 6. | IV | Environmental Studies | | 2 | 2 | Environmental studies | 25 | 75 | 100 |
| | | **Sem. Total** | | **36** | **20** | | **150** | **450** | **600** |
| | | | | | | | | | |
| **SEMESTER II** | | | | | | | CIA | Uni. Exam | Total |
| 7. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 8. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| **9.** | II | NMSDC I : Language Proficiency for Employability | **Paper-1** | 2 | 2 | **Effective English** | 25 | 75 | 100 |
| 10. | III | Core Theory | Paper-2 | 4 | 4 | Heat and Thermodynamics | 25 | 75 | 100 |
| 11. | III | Core Practical | Practical-1 | 3 | 2 | Practical - I | 25 | 75 | 100 |
| 12. | III | Allied-1 | Paper-2 | 4 | 3 | Chemistry II or Biochemistry II | 25 | 75 | 100 |
| 13. | III | Allied Practical | Practical-1 | 3 | 2 | Practical-Allied | 25 | 75 | 100 |
| **14.** | III | **PE** | **Paper 1** | 6 | 3 | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | Value Education | 25 | 75 | 100 |
| 16. | IV | Soft Skill | | 2 | 1 | Soft Skill | 25 | 75 | 100 |
| | | **Sem. Total** | | **36** | **27** | | **250** | **750** | **1000** |
| | | | | | | | | | |
| **SEMESTER III** | | | | | | | CIA | Uni. Exam | Total |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |

| No. | Part | Subject | Paper | Hrs | Cr | Title | Int | Ext | Total |
|---|---|---|---|---|---|---|---|---|---|
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-3 | 5 | 4 | Electricity, Magnetism and Electromagnetism | 25 | 75 | 100 |
| | III | Core Practical | Paper-2 | 3 | 0 | | 0 | 0 | 0 |
| 20. | III | Allied-2 | Paper-3 | 6 | 3 | Mathematics I | 25 | 75 | 100 |
| 21. | IV | Skill Based Subject | Paper-1 | 2 | 2 | Basic Electrical Technology | 25 | 75 | 100 |
| 22. | IV | Non-Major Elective | Paper-1 | 2 | 2 | Environmental Physics | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **19** | | **150** | **450** | **600** |

### SEMESTER IV

| No. | Part | Subject | Paper | Hrs | Cr | Title | Int | Ext | Total |
|---|---|---|---|---|---|---|---|---|---|
| 23. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 24. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 25. | III | Core Theory | Paper-4 | 5 | 5 | Waves and Optics | 25 | 75 | 100 |
| 26. | III | Core Practical | Practical-2 | 3 | 3 | Any 15 Experiments given in the syllabus | 25 | 75 | 100 |
| 27. | III | Allied-2 | Paper-4 | 6 | 5 | Mathematics II | 25 | 75 | 100 |
| 28. | IV | NMSDC II : Digital Skills for Employability | Paper-2 | 2 | 2 | Office Fundamentals | 25 | 75 | 100 |
| 29. | IV | Non-Major Elective | Paper-2 | 2 | 2 | Everyday Physics | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **25** | | **175** | **525** | **700** |

### SEMESTER V

| No. | Part | Subject | Paper | Hrs | Cr | Title | Int | Ext | Total |
|---|---|---|---|---|---|---|---|---|---|
| 30. | III | Core Theory | Paper-5 | 6 | 6 | Atomic and Molecular Physics | 25 | 75 | 100 |
| 31. | III | Core Theory | Paper-6 | 6 | 6 | Relativity and Quantum mechanics | 25 | 75 | 100 |
| 32. | III | Core Theory | Paper-7 | 6 | 6 | Basic and Applied Electronics | 25 | 75 | 100 |
| | III | Core Practical | Practical-3 | 3 | 0 | General Practical | 0 | 0 | 0 |
| | III | Core Practical | Practical-4 | 3 | 0 | Electronics Practical | 0 | 0 | 0 |
| 33. | III | Elective | Paper-1 | 4 | 3 | Group (A) or (B) or (C) | 25 | 75 | 100 |
| 34. | IV | Skill Based Subject | Paper-2 | 2 | 2 | Cell Phone Technology | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **23** | | **125** | **375** | **500** |

### SEMESTER VI

| No. | Part | Subject | Paper | Hrs | Cr | Title | Int | Ext | Total |
|---|---|---|---|---|---|---|---|---|---|
| 35. | III | Core Theory | Paper-8 | 6 | 5 | Nuclear and Particle Physics | 25 | 75 | 100 |
| 36. | III | Core Theory | Paper-9 | 5 | 5 | Solid State Physics | 25 | 75 | 100 |
| 37. | III | Core Practical | Practical-3 | 3 | 3 | General Practical | 25 | 75 | 100 |
| 38. | III | Core Practical | Practical-4 | 3 | 3 | Electronics Practical | 25 | 75 | 100 |
| 39. | III | Elective | Paper-2 | 4 | 3 | Group (A) or (B) or (C) | 25 | 75 | 100 |
| 40. | III | Elective | Paper-3 | 4 | 3 | Group (A) or (B) or (C) | 25 | 75 | 100 |
| 41. | III | Compulsory Project | Paper-10 | 3 | 3 | Group / Individual Project | 25 | 75 | 100 |
| 42. | III | NMSDC III : Data Analytics with Advanced Tools for Employability | Paper-3 | 2 | 2 | Project Based Learning III | 25 | 75 | 100 |
| 43. | V | Extension Activities | | 0 | 1 | | 100 | 0 | 100 |
| | | **Sem. Total** | | **30** | **28** | | **300** | **600** | **900** |
| | | **Grand Total** | | | **142** | | | | **4300** |

# THIRUVALLUVAR UNIVERSITY

## BACHELOR OF SCIENCE
## B.Sc. ZOOLOGY
## DEGREE COURSE

### (With effect from 2022 - 2023)

## The Course of Study and the Scheme of Examinations

| S. No. | Part | Study Components — Course Title | | Ins. Hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|---|
| | | **SEMESTER I** | | | | | CIA | Uni. Exam | Total |
| 1. | I | Language | Paper-1 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 2. | II | English (CE) | Paper-1 | 6 | 4 | **Communicative English I** | 25 | 75 | 100 |
| 3. | III | Core Theory | Paper-1 | 6 | 4 | Invertebrata | 25 | 75 | 100 |
| | III | Core Practical | Practical-1 | 4 | 0 | Invertebrata and chordata | 0 | 0 | 0 |
| 4. | III | Allied -1 | Paper-1 | 4 | 3 | (To choose 1 out of 3)<br>1. Chemistry – I<br>2. Botany – I<br>3. Economic Entomology – I | 25 | 75 | 100 |
| | III | Allied- 1 | Practical-1 | 2 | 0 | | 0 | 0 | 0 |
| **5.** | III | **PE** | **Paper 1** | 6 | **3** | **Professional English I** | **25** | **75** | **100** |
| 6. | IV | Environmental Studies | | 2 | 2 | Environmental studies | 25 | 75 | 100 |
| | | **Sem. Total** | | **36** | **20** | | **150** | **450** | **600** |
| | | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| 7. | I | Language | Paper-2 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 8. | II | English (CE) | Paper-2 | 4 | 4 | **Communicative English II** | 25 | 75 | 100 |
| 9. | II | **NMSDC I : Language Proficiency for Employability** | **Paper 1** | **2** | **2** | **Effective English** | **25** | **75** | **100** |
| 10. | III | Core Theory | Paper-2 | 5 | 4 | Chordata | 25 | 75 | 100 |
| 11. | III | Core Practical | Practical-1 | 3 | 2 | Invertebrata and chordata | 25 | 75 | 100 |
| 12. | III | Allied-1 | Paper-2 | 4 | 3 | (To choose 1 out of 3)<br>1. Chemistry II<br>2. Botany II<br>3. Economic Entomology II | 25 | 75 | 100 |
| 13. | III | Allied Practical - 1 | Practical-1 | 2 | 2 | | 25 | 75 | 100 |
| **14.** | III | **PE** | **Paper 1** | 6 | **3** | **Professional English II** | 25 | 75 | 100 |
| 15. | IV | Value Education | | 2 | 2 | | 25 | 75 | 100 |

| | | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| 16. | IV | Soft Skill | | 2 | 1 | | 25 | 75 | 100 |
| | | **Sem. Total** | | **36** | **27** | | **250** | **750** | **1000** |
| | | | | | | | | | |
| | | **SEMESTER III** | | | | | CIA | Uni. Exam | Total |
| 17. | I | Language | Paper-3 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 18. | II | English | Paper-3 | 6 | 4 | English | 25 | 75 | 100 |
| 19. | III | Core Theory | Paper-3 | 4 | 4 | Cell and molecular Biology | 25 | 75 | 100 |
| | III | Core Practical | Practical- II | 3 | 0 | Cell and molecular Biology | 0 | 0 | 0 |
| 20. | III | Allied-2 | Paper-3 | 4 | 3 | **(To choose 1 out of 3)** 1. Chemistry - I 2. Botany - I 3. Economic Entomology - I | 25 | 75 | 100 |
| | | Allied Practical - 2 | Practical-2 | 3 | 0 | | 0 | 0 | 0 |
| 21. | IV | Skill Based Subject | Paper-1 | 2 | 2 | **(To choose 1 out of 2)** 1.Vermiculture 2. Single Cell Protein Culture | 25 | 75 | 100 |
| 22. | IV | Non-Major Elective | Paper-1 | 2 | 2 | **(To choose 1 out of 2)** 1.Public Health and Hygine 2.Poultry Farming | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **19** | | **150** | **450** | **600** |
| | | | | | | | | | |
| | | **SEMESTER IV** | | | | | CIA | Uni. Exam | Total |
| 23. | I | Language | Paper-4 | 6 | 4 | Tamil/Other Languages | 25 | 75 | 100 |
| 24. | II | English | Paper-4 | 6 | 4 | English | 25 | 75 | 100 |
| 25. | III | Core Theory | Paper-4 | 4 | 4 | Genetics and Biotechnology | 25 | 75 | 100 |
| 26. | III | Core Practical | Practical-2 | 3 | 3 | Cell and molecular Biology and Genetics and Biotechnology | 25 | 75 | 100 |
| 27. | III | Allied-2 | Paper-4 | 4 | 3 | (To choose 1 out of 3) 1. Chemistry II 2. Botany II 3. Economic Entomology II | 25 | 75 | 100 |
| 28. | III | Allied Practical - 2 | Practical-2 | 3 | 2 | | 25 | 75 | 100 |
| 29. | IV | **NMSDC II : Digital Skills for Employability** | **Paper-2** | **2** | **2** | **Office Fundamentals** | **25** | **75** | **100** |
| 30. | IV | Non-Major Elective | Paper-2 | 2 | 2 | **(To choose 1 out of 2)** 1. Bio-Fertilizer Production 2. Aquarium Fish keeping | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **24** | | **200** | **600** | **800** |
| | | | | | | | | | |
| | | **SEMESTER V** | | | | | CIA | Uni. | Total |

| | | | | | | | Exam | |
|---|---|---|---|---|---|---|---|---|
| 30. | III | Core Theory | Paper-5 | 6 | 6 | Bio-Statistics and Bio-Informatics | 25 | 75 | 100 |
| | III | Core Practical | Practical-3 | 3 | 0 | Bio-Statistics and Bio-Informatics Developmental Biology and Immunology Animal Physiology | 0 | 0 | 0 |
| 31. | III | Core Theory | Paper-6 | 6 | 6 | Developmental Biology and Immunology | 25 | 75 | 100 |
| | | Core Practical | Practical-4 | 3 | 0 | Environmental Biology Economic Zoology | 0 | 0 | 0 |
| 32. | III | Core Theory | Paper-7 | 6 | 5 | Animal Physiology | 25 | 75 | 100 |
| 33. | III | Internal Elective | Paper-1 | 3 | 3 | (To choose 1 out of 2) 1. NanoTechnology in Life Sciences 2.Human Endocrinology | 25 | 75 | 100 |
| 34. | IV | Skill Based Subject | Paper-2 | 3 | 2 | (To choose 1 out of 2) 1. Animal Behavior 2.VegetableMeat Culture | 25 | 75 | 100 |
| | | **Sem. Total** | | **30** | **22** | | **125** | **375** | **500** |
| | | | | | | | | | |

| | | **SEMESTER VI** | | | | | **CIA** | **Uni. Exam** | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| 35. | III | Core Theory | Paper-8 | 5 | 5 | Environmental Biology | 25 | 75 | 100 |
| 36. | III | Core Theory | Paper-9 | 5 | 5 | Economic Zoology | 25 | 75 | 100 |
| 37. | III | Core Practical | Practical-3 | 3 | 3 | Bio-Statistics and Bio-Informatics Developmental Biology and Immunology Animal Physiology | 25 | 75 | 100 |
| 38. | III | Core Practical | Practical-4 | 3 | 3 | Environmental Biology Economic Zoology | 25 | 75 | 100 |
| 39. | III | Compulsory Project | Paper-10 | 5 | 5 | Individual / Group Project | 25 | 75 | 100 |
| 40. | III | Internal Elective | Paper-2 | 3 | 3 | (To choose 1 out of 2) 1. Evolution 2.Microbiology | 25 | 75 | 100 |
| 41. | III | Internal Elective | Paper-3 | 3 | 3 | (To choose 1 out of 2) 1. Bio Chemistry 2.Applied Entomology | 25 | 75 | 100 |
| 42. | IV | Skill based Subject | Paper-3 | 3 | 2 | (To choose 1 out of 2) 1.Medical Lab Technology 2.Industrial Fishery Management | 25 | 75 | 100 |
| 43. | V | Extension Activities | | 0 | 1 | | 100 | 0 | 100 |

| 44. | | NMSDC III : Employability Readiness | | -- | -- | (choose any one)<br>• Naandi<br>• Unnati<br>• Quest<br>• Izpay<br>• IBM Skills build | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Sem. Total | | 30 | 30 | | 300 | 600 | 900 |
| | | | | | 142 | | | | |
| | | | | | | | | | |

### AI Fluency

- Pre-Assessment: https://forms.office.com/r/TmFs7wLkW2
- [Video Link](#)
- Post-Assessment: https://forms.office.com/r/13RhGzvzLK

### Digital Productivity

- Pre-Assessment: https://forms.office.com/r/ppW1g0aXzi
- [Video Link](#)
- Post-Assessment: https://forms.office.com/r/GU3NNXGkiZ

### Employability

- Pre-Assessment: https://forms.office.com/r/PUhRPp0YZ1
- [Video Link](#)
- Post-Assessment: https://forms.office.com/r/LDNKvr5LvB

### Communication

- Pre-Assessment: https://forms.office.com/r/T9AQd0409y
- [Video Link](#)
- Post-Assessment: https://forms.office.com/r/3RVnQSag0Z

### Entrepreneurship

- Pre-Assessment: https://forms.office.com/r/bwNNGeMBg1
- [Video Link](#)
- Post-Assessment: https://forms.office.com/r/wcQCADieGT

**Semester: I/III**                                                                                    **Paper type: Allied**

**Paper code: A – 01          Name of the Paper: ALLIED MATHEMATICS – I          Credit:4**
**(For B.Sc., Physics , Chemistry, Computer Science and Statistics)**

Total Hours per Week: 7          Lecture Hours: 7                    Tutorial Hours: ….. Practical Hours: …..

……………………………………………………………………………………………………

**Course Objective**

    1. To explore the fundamental concepts of Mathematics.
    2. To acquire knowledge about finding approximate roots of the polynomial equations.
    3. To improve students' ability in applications of matrices and calculus.
    4. Students are exposed to understanding the concept of derivatives and their applications.
    5. To expose double and triple integrals and their applications.

**Course Outcomes**

1. After studied unit -1, the student will be able to find out the approximate roots of polynomial equations.

2.  After studied unit -2, the student will be able to develop the skills of finding roots of simultaneous equations.

3. After studied unit -3, the student will be able to demonstrate knowledge about matrices and their applications.

4. After studied unit -4, the student will be able to carry out calculations of problems related to curvature and radius of curvature.

5. After studied unit -5, the student will be able to evaluate double and triple integrals, and enabled to understand the applications of integration in real-life situations.

**Matching Table**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | Yes | Yes | Yes | Yes | Yes | Yes |
| 2 | Yes | Yes | Yes | Yes | Yes | Yes |
| 3 | Yes | Yes | Yes | No | Yes | No |
| 4 | Yes | Yes | Yes | Yes | Yes | No |
| 5 | Yes | Yes | Yes | Yes | Yes | Yes |

**UNIT-I: SOLUTIONS OF TRANSCENDENTAL AND ALGEBRAIC EQUATIONS**

Iteration method**,** Bisection method, Newton's method - Regula Falsi method, Horner's method(without proof) (Simple problems only)

**Unit-II: SOLUTIONS OF SIMULTANEOUS EQUATIONS**

Gauss Elimination method - Gauss Jordan method - Gauss Seidel Iterative method - Gauss Jacobi method (Restricted to three variables only) (Simple problems only)

**UNIT-III: MATRICES**

Characteristic equation of a square matrix– Eigen values and eigen vectors – Cayley – Hamilton theorem [without proof] – Verification and computation of inverse matrix-

**UNIT-IV: DIFFERENTIAL CALCULUS**

n-th derivatives – Leibnitz theorem [without proof] and applications – Jacobians– Curvature and radius  of curvature in Cartesian co-ordinates and polar co-ordinates.

**UNIT-V: APPLICATION OF INTEGRATION**

Evaluation of double, triple integrals – Simple applications to area, volume, and centroid.

**TEXT BOOKS:**
1. P.Kandasamy, K.Thilagavathy (2003) Calculus of Finite differences & Numerical Analysis, S. Chand & Company Ltd., New Delhi-55.
   Unit-I: Chapter 1
   Unit-II: Chapter 2

2. P. Duraipandian and Dr. S. Udayabaskaran (1997), "Allied Mathematics" , Vol I & II. Chennai:  Muhil Publishers.
   Unit-III: Sec(1.1.1,1.1.2,1.2,1.4.3),
   Unit-IV: Sec(2.7,4.1,4.1.1,4.2),
   Unit-V: Chap:3(3.4,3.4.1,3.5,3.5.1,3.5.2,3.6),

**REFERENCE BOOKS:**

1. P. Balasubramanian and K. G. Subramanian. 1997, "Ancillary Mathematics", Vol I & II. New Delhi: Tata McGraw Hill.
2. S.P.Rajagopalan and R.Sattanathan(2005), "Allied Mathematics", Vol I & II. New Delhi: Vikas Publications.
3. S.J.Venkatesan, "Allied Mathematics - I", Sri Krishna Publications, Chennai.
4. P. R. Vittal (2003), "Allied Mathematics", Margham Publication, Chennai.
5. A.Singaravelu "Numerical Methods"Meenakshi Publications

**Course Material:** website links, e-Books and e-journals
https://www.classcentral.com/course/polynomials-roots-44577
https://ocw.mit.edu/courses/22-15-essential-numerical-methods-fall-2014/pages/syllabus/
https://ocw.mit.edu/courses/18-330-introduction-to-numerical-analysis-spring-2004/
https://tutorial.math.lamar.edu/Classes/CalcII/CalcII.aspx

**Mapping with Programme Outcomes**

| Cos | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | S | S | M | M | S | M | S | S | M |
| CO2 | M | S | S | S | S | S | S | M | M | S |
| CO3 | M | S | S | S | S | S | M | S | S | S |
| CO4 | S | S | S | M | S | S | M | M | M | S |
| CO5 | S | M | S | M | M | M | M | S | S | S |

PO – Programme Outcome, CO – Course outcome
S – Strong, M – Medium, L – Low (may be avoided)

Semester: II/IV                                                                              **Paper type: Allied**

**Paper code: A – 02 Name of the Paper: PAPER – 2 – ALLIED MATHEMATICS –II Credit:4**

**(For B.Sc., Physics , Chemistry, Computer Science and Statistics)**

Total Hours per Week: 7          Lecture Hours: 7                    Tutorial Hours: ….. Practical Hours: …..

……………………………………………………………………………………………………………

**Course Objective**

1. This course is designed for the students to expose the topics such as expansions of trigonometric functions, partial differential equations, vector differentiation, and integration.
2.  To gain knowledge of expansions of trigonometric functions.
3.  To acquire the knowledge of solving partial differential equations.
4.  Basic knowledge of vector calculus.
**5.**  To understand and carry out the calculations of a given set of data.

**Course Outcomes**

1.   After studied unit -1, the student will be able to find out the expansions of trigonometric functions and carry out problems related to hyperbolic and inverse hyperbolic functions.

2.   After studied unit -2, the student will be able to provide a basic knowledge of partial differential equations and develops knowledge on handling practical problems.

3.   After studied unit -3, the student will be able to demonstrate knowledge of solving problems involving vector and scalar functions.

4.   After studied unit -4, the student will be able to carry out problems on vector integration.

5.   After studied unit -5, the student will be able to understand the applications of differentiation and integration in real-life situations.

**Matching Table**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1    | Yes            | Yes               | Yes           | No            | Yes           | No           |
| 2    | Yes            | Yes               | Yes           | Yes           | Yes           | Yes          |
| 3    | Yes            | Yes               | Yes           | Yes           | Yes           | Yes          |
| 4    | Yes            | Yes               | Yes           | Yes           | Yes           | No           |
| 5    | Yes            | Yes               | Yes           | Yes           | Yes           | No           |

**UNIT-I:TRIGONOMETRY**

Expansions of $\sin^n \theta$, $\cos^n \theta$, $\sin n\theta$, $\cos n\theta$, $\tan n\theta$ – Expansions of $\sin\theta$, $\cos\theta$, $\tan\theta$ in terms of $\theta$ – Hyperbolic and inverse hyperbolic functions – Logarithms of complex numbers.
Unit-I: Chap: 6 (6.1,6.1.1-6.1.3,6.2,6.2.1-6.2.3,6.3,6.4)

**UNIT-II: PARTIAL DIFFERENTIAL EQUATIONS**

Formation-complete integrals and general integrals-Four standard types-Lagranges equations.
Unit-II: Chap:6 (6.1,6.1.1,6.2,6.3,6.4).

**UNIT-III: VECTOR DIFFRENTIATION**

Vector functions- Derivative of a vector function- Scalar and vector point functions- Gradient of a scalar point function- Gradient- Directional derivatives –Unit vector  normal to a surface – angle between the surfaces-divergence, curl.
Unit-IIISec(8.1,8.1.1,8.2,8.3,8.3.1,8.3.2,8.4,8.4.1,8.4.2,8.4.3,8.4.4).

**UNIT-IV: VECTOR INTEGRATION**

Green's theorem in the plane- Gauss divergence theorem- Stoke's theorem [without proofs].
Unit-IV:Sec(8.6.1, - 8.6.3).

**UNIT-V: FINITE DIFFERENCES**

Operator E, Relation between $\Delta$ , $\nabla$ and E – Interpolation – Newton – Gregory forward & backward formulae for interpolation-Lagrange's interpolation formula for unequal intervals(without proof) .
Unit-V:Sec(5.1,5.2).

**TEXT BOOK:**
1.P. Duraipandian and S. Udayabaskaran(1997), "Allied Mathematics", Vol I & II. Chennai: Muhil Publishers.
   Unit-I: Chap: 6 (6.1,6.1.1-6.1.3,6.2,6.2.1-6.2.3,6.3,6.4), Vol I,
   Unit-II: Chap:6 (6.1,6.1.1,6.2,6.3,6.4), Vol II,
   Unit-IIISec(8.1,8.1.1,8.2,8.3,8.3.1,8.3.2,8.4,8.4.1,8.4.2,8.4.3,8.4.4),Vol I,
Unit-IV:Sec(8.6.1, - 8.6.3), Vol I,
Unit-V:Sec(5.1,5.2), Vol II.

**REFERENCE BOOKS:**
1.  P. Balasubramanian and K. G. Subramanian. 1997, "Ancillary Mathematics", Vol I & II. New Delhi: Tata McGraw Hill.
2.  S.P.Rajagopalan and R.Sattanathan(2005), "Allied Mathematics", Vol I & II. New Delhi: Vikas Publications.
3.  S.J.Venkatesan, "Allied Mathematics - II", Sri Krishna Publications, Chennai.
4.  P. R. Vittal (2003), "Allied Mathematics", Margham Publications, Chennai.
5.  P.Kandhasamy, K. Thilagavathy (2003), "Allied Mathematics" Vol I & II, New Delhi: Tata McGraw Hill.
6.  P.Kandasamy, K.Thilagavathy (2003) Calculus of Finite differences & Numerical Analysis, S. Chand & Company Ltd., New Delhi-55.

**Course Material:** website links, e-Books and e-journals
https://tutorial.math.lamar.edu/Extras/AlgebraTrigReview/AlgebraTrig.aspx

https://ocw.mit.edu/courses/18-330-introduction-to-numerical-analysis-spring-2004/
https://www.engineering.iastate.edu/student-services/orientation/math-142-trigonometry-analytical-geometry/
https://www.classcentral.com/course/edx-differential-equations-fourier-series-and-partial-differential-equations-11763
https://www.classcentral.com/course/vector-calculus-engineers-17387
https://www.classcentral.com/course/brilliant-vector-calculus-59277

**Mapping with Programme Outcomes**

| Cos | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | S | S | M | M | M | M | M | M | M |
| CO2 | M | M | M | S | S | S | M | S | S | M |
| CO3 | S | S | S | S | M | M | S | S | M | S |
| CO4 | M | S | S | S | S | M | M | M | M | M |
| CO5 | S | S | S | M | M | M | M | M | M | M |

PO – Programme Outcome     CO – Course outcome

S – Strong     M-Medium     L – Low (may be avoided)

## THIRUVALLUVAR UNIVERSITY
## M.A., DEFENCE AND STRATEGIC STUDIES
## SYLLABUS
## UNDER CBCS
## (With effect from 2022-2023)
## The Course of Study and the Scheme of Examination

| Sl. No. | Study Components Course title | | Ins. hrs /week | Credit | Title of the paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | CIA | Uni Exam | Total |
| **SEMESTER I** | | | | | | CIA | Uni Exam | Total |
| 1. | Core | Paper 1 | 5 | 4 | Introduction to International Relations | 25 | 75 | 100 |
| 2. | | Paper 2 | 5 | 4 | War-Its Causes and Consequences | 25 | 75 | 100 |
| 3. | | Paper 3 | 5 | 4 | Conceptual Aspect of Security | 25 | 75 | 100 |
| 4. | | Paper 4 | 5 | 4 | India's National Security | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 5. | Core Elective | Paper 1 | 5 | 3 | (to choose one out of 3) a) India's Security Policy b) Act East Policy c) India's policy towards USA | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi-disciplinary papers)** | | | | | | | | |
| 6. | Open Elective | Paper 1 | 5 | 3 | (to choose one out of 3) a) National Security b) Disaster Management c) Insurgency and Security | 25 | 75 | 100 |
| | | | 30 | 22 | | 150 | 450 | **600** |
| | | | | | | | | |
| **SEMESTER II** | | | | | | CIA | Uni Exam | Total |
| 7. | Core | Paper 5 | 6 | 4 | Theories of International Relations | 25 | 75 | 100 |
| 8. | | Paper 6 | 6 | 4 | Introduction to International Law | 25 | 75 | 100 |
| 9. | | Paper 7 | 6 | 4 | Strategic Thought | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 10. | Core Elective | Paper -2 | 4 | 3 | (to choose one out of 3) a) Introduction to Peace Study b) Gandhian Studies c) Ambedkar's thoughts of Peace | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi-disciplinary papers)** | | | | | | | | |

| | | | | | | | CIA | Uni Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| 11. | Open Elective | Paper 2 | 4 | 3 | (to choose one out of 3)<br>a) Maritime Security<br>b) Cyber Security<br>c) Island Security | | 25 | 75 | 100 |
| 12. | Field Study | | - | 2 | | | 100 | - | 100 |
| 13. | Compulsory Paper | | 4 | 2 | Human Rights | | 25 | 75 | 100 |
| | | | 30 | 22 | | | 250 | 450 | 700 |

| | | | | | | CIA | Uni Exam | Total |
|---|---|---|---|---|---|---|---|---|
| **SEMESTER III** | | | | | | | | |
| 14. | | Paper 9 | 6 | 5 | Geo-Politics | 25 | 75 | 100 |
| 15. | Core | Paper 10 | 6 | 4 | Defence Economics | 25 | 75 | 100 |
| 16. | | Paper 11 | 6 | 4 | Low Intensity Conflict | 25 | 75 | 100 |
| 17. | | Paper-12 | 6 | 4 | Contemporary International Security | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 18. | Core Elective | Paper -3 | 3 | 3 | (to choose one out of 3)<br>a) Comprehensive Security<br>b) Environmental Security<br>c) Economic Security | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi-disciplinary papers)** | | | | | | | | |
| 19. | Open Elective | Paper 3 | 3 | 3 | (to choose one out of 3)<br>a) Governance of Security<br>b) Industrial Security<br>c) Information Security | 25 | 75 | 100 |
| 20. | MOOC Courses | | - | 2 | SWAYAM, NPTEL | - | - | 100 |
| | | | 30 | 25 | | 150 | 450 | 700 |

| | | | | | | CIA | Uni Exam | Total |
|---|---|---|---|---|---|---|---|---|
| **SEMESTER IV** | | | | | | | | |
| **21.** | Core | Paper 13 | 5 | 4 | Research Methodology in Social Science | 25 | 75 | 100 |
| **22.** | | Paper 14 | 5 | 4 | Conflict Resolution | 25 | 75 | 100 |
| **23.** | | Paper 15 | 5 | 4 | Science and Technology and Security | 25 | 75 | 100 |
| **24.** | Core | Project | 5 | 5 | Project with Viva Voce | 100<br>(75 Project +25 viva) | | 100 |
| **Internal Elective for same major students** | | | | | | | | |

| 25. | Core Elective | Paper -4 | 5 | 3 | (to choose one out of 3) a) Area Studies –South Asia and Neighbours b) South East and West Asia c) Central Asia Responsibility | 25 | 75 | 100 |
|---|---|---|---|---|---|---|---|---|
| **External Elective for other major students (Inter/multi-disciplinary papers)** | | | | | | | | |
| 26. | Open Elective | Paper -4 | 5 | 3 | (to choose one out of 3) a) Introduction to Defence Journalism b)Management of Refugee crisis. c)  Indian Ocean Studies | 25 | 75 | 100 |
| | | | **30** | **23** | | **150** | **450** | **600** |
| | | | **120** | **92** | | | | **2600** |
| | | | | | | | | |

**SEMESTER-I**

**CORE**

**PAPER 4**

**INDIA'S NATIONAL SECURITY**

**Syllabus     2022-**
**Version     23**

**Course Objectives:**
The main objectives of this course are to: To inculcate knowledge on National Security of India

**Expected Course Outcomes:**
On the successful completion of the course, student will be able to:

| | | |
|---|---|---|
| 1 | Understanding  basics of National Security | K1 |
| 2 | Understand the India's security relationship with Russia | K2 |
| 3 | Understand the India's security relationship with USA. | K3 |
| 4 | Understand the India's security problem with Pakistan | K4 |
| 5 | Understand the India's security problem with China | K5 |

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create

**Unit:1**

Introduction – Concept and meaning of National Security and its Objectives

**Unit:2**

India's Security Relationship with Russia.

**Unit:3**
India's Security relationship with USA

**Unit:4**

India's Security Problems with Pakistan.

**Unit:5**

India's Security Problems and Policies with China.

**REFERENCE BOOKS**

1. Barry, Buzon, People, State and Fear: The National Security problems in International Relations, Sussex; Wheatsheaf of Books, 1983.
2. Bajpai, U.S., (ed) India's Security: The Politico-Strategic Environment, New Delhi: Lancers Books, 1983.
3. Dixit, J.N., Across Borders: Fifty Years of India's Foreign Policy, New Delhi: Picus Books, 1998.
4. Sathish Kumar, (ed)., Yearbook on India's foreign Policy, New Delhi: Deep & Deep, 1993.
5. Barry, Buzon, People, State and Fear: The National Security problems in International Relations, Sussex; Wheatsheaf of Books, 1983.

**SEMESTER-IV**

| Course code | | |
|---|---|---|
| **CORE** | **RESEARCH METHODOLOGY IN SOCIAL SCIENCE** | |
| **PAPER- 13** | | **Syllabus 2022 Version -23** |

**Course Objectives:**
The main objectives of this course are To obtain knowledge on Research Methodology in Defence and Strategic Studies

**Expected Course Outcomes:**
On the successful completion of the course, student will be able to:

| 1 | Remember the concept of Research | K1 |
|---|---|---|
| 2 | Understand the concepts of Sampling | K2 |
| 3 | Describe the Data Processing and Analyzing | K3 |
| 4 | Explain the concepts of Peace Research | K4 |
| 5 | Understand the Case study | K5 |

**K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create

**Unit:1**

Research in Defence and Strategic Studies: Definition, scope, various type of Research, Major steps in Research-Design and Hypothesis

**Unit:2**

Sampling: Meaning, Definition, Need and Types –Data Collection-Primary and Secondary data, tools of data collection- questionnaire and interviews.

**Unit:3**
Data Processing and Analyzing: Use of Computer in Social Research Analysis of Data-Interpretation.

**Unit:4**
Peace Research: Application, practical Problems and Research reports

**Unit:5**
Case study

**Reference books**

1. Pannerselvam R, Research Methodology, Prentice Hall of India, New Delhi-2004
2. Green P.E, Research Methodology Decisions, Prentice Hall of India, New Delhi-1994

| **Mapping with Programme Outcomes** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | L | L | L | L | M | M | L | L | L |
| **CO2** | S | L | M | M | L | L | L | L | L | L |
| **CO3** | S | L | L | M | SL | M | L | L | L | L |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CO4** | S | L | M | L | L | M | L | L | L | L |
| **CO5** | S | L | M | M | L | M | M | L | L | L |
| | | | | | | | | | | |

*S-Strong; M-Medium; L-Low

# THIRUVALLUVAR UNIVERSITY

# M.A. ECONOMICS

# SYLLABUS

# UNDER CBCS

## (With effect from 2022-2023)

**The Course of Study and the Scheme of Examinations**

| S. No | Study Components | Course Title | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | CIA | Uni. Exam | Total |
| | **SEMESTER I** | | | | | | | |
| 1. | Core | Paper 1 | 6 | 4 | Microeconomics – I | 25 | 75 | 100 |
| 2. | Core | Paper 2 | 6 | 4 | Macroeconomics – I | 25 | 75 | 100 |
| 3. | Core | Paper 3 | 6 | 4 | Statistics for Economics – I | 25 | 75 | 100 |
| 4. | Core | Paper 4 | 6 | 4 | Indian Economic Development | 25 | 75 | 100 |
| | Internal Elective for same major students (Choose any one) | | | | | | | |
| 5. | Core Elective | Paper-1 | 3 | 3 | A. Agricultural Economics B. Labour Economics C. Monetary Economics | 25 | 75 | 100 |
| | External Elective for other major students (Inter/multi-disciplinary papers) | | | | | | | |
| 6. | Open Elective | Paper-1 | 3 | 3 | (To choose one out of 3) A. Basic Economics B. Recent Issues in Indian Economy - I C. An Introduction to Environmental Economics | 25 | 75 | 100 |
| | | | 30 | 22 | | 150 | 450 | 600 |
| | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| 7. | Core | Paper 5 | 6 | 4 | Microeconomics – II | 25 | 75 | 100 |
| 8. | Core | Paper 6 | 6 | 4 | Macroeconomics – II | 25 | 75 | 100 |
| 9. | Core | Paper 7 | 6 | 4 | Statistics for Economics – II | 25 | 75 | 100 |
| | Internal Elective for same major students (Choose any one) | | | | | | | |
| 10. | Core Elective | Paper-2 | 5 | 3 | A. Economics of Social Issues B. Statistical Software C. Mathematical Economics | 25 | 75 | 100 |
| | External Elective for other major students (Inter/multi-disciplinary papers) | | | | | | | |

| 11. | Open Elective | Paper-2 | 5 | 3 | (To choose one out of 3)<br>A. Marketing Management<br>B. Recent Issues in Indian Economy - II<br>C. Agricultural Economy of India | 25 | 75 | 100 |
|---|---|---|---|---|---|---|---|---|
| 12. | Field Study | | - | 2 | | 100 | - | 100 |
| 13. | Compulsory Paper | | 2 | 2 | Human Rights | 25 | 75 | 100 |
| | | | **30** | **22** | | **250** | **450** | **700** |

| | **SEMESTER III** | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|
| 14. | Core | Paper 8 | 5 | 4 | Public Finance I | 25 | 75 | 100 |
| 15. | Core | Paper 9 | 5 | 4 | International Economics | 25 | 75 | 100 |
| 16. | Core | Paper 10 | 5 | 4 | Economics of Growth and Development | 25 | 75 | 100 |
| 17. | Core | Paper 11 | 5 | 4 | Research Methodology | 25 | 75 | 100 |
| Internal Elective for same major students (Choose any one) |||||||||
| 18. | **Core Elective** | **Paper-3** | 5 | 3 | (to choose one out of 3)<br>A. Industrial Economics<br>B. Econometrics<br>C. Health Economics | 25 | 75 | 100 |
| External Elective for other major students (Inter/multi disciplinary papers) |||||||||
| 19. | **Open Elective** | **Paper-3** | 5 | 3 | (to choose one out of 3)<br>A. Tamilnadu Economics<br>B. Labour Economics<br>C. Urban Economics | 25 | 75 | 100 |
| 20. | **MOOC Courses** | | - | 2 | 1. Environmental Economics<br>2. Contemporary Economics<br>3. Managerial Economics<br>4. Operations Research<br>5. Communication Skill<br>6. Economics of Tourism<br>7.Business Planning and Management<br>8. Financial Management<br>9. Marketing Management<br>10. Engineering Econometrics | - | - | 100 |
| | | | **30** | **24** | | **150** | **450** | **700** |
| | **SEMESTER IV** | | | | | CIA | Uni. Exam | Total |
| 21. | Core | Paper 12 | 6 | 5 | Public Finance II | 25 | 75 | 100 |
| 22. | Core | Paper 13 | 6 | 4 | Managerial Economics | 25 | 75 | 100 |
| 23. | Core | Paper 14 | 5 | 4 | History of Economic Thought | 25 | 75 | 100 |
| 24. | **Core** | **Project** | **5** | | Project with *viva voce* | 100 | | 100 |

| | | **Compulsory** | | 5 | | | | (75 Project +25 viva) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Internal Elective for same major students (Choose any one) | | | | | | |
| 25. | Core Elective | Paper-4 | 4 | 3 | A. Human Resource Development<br>B. Financial Economics<br>C. Environmental Economics | 25 | 75 | 100 | |
| | | | External Elective for other major students (Inter/multi disciplinary papers) | | | | | | |
| 26. | **Open Elective** | **Paper-4** | 4 | 3 | **(to choose one out of 3)**<br>A. Economics of insurance<br>B. Rural Economic development<br>C. Women And Economy | 25 | 75 | 100 | |
| | | | **30** | **24** | | **125** | **375** | **600** | |
| | | | **120** | **92** | | | | **2600** | |

# THIRUVALLUVAR UNIVERSITY VELLORE, 632 115

# M.A. ECONOMICS - 2022 – 2023 onwards

## SEMESTER – I          PAPER TYPE: CORE

### PAPER –3   STATISTICS FOR ECONOMICS I

**Course Objectives:**
1. To make students understand the concept of measurements of statistics.
2. To make student to gain knowledge with numerical and quantitative issues in business.
3. To enable the students to use statistical sampling methods.
4. To have a proper understanding of statistical applications.
5. To give practical knowledge of using basic statistical data.

**Course outcomes**

1. After studying Unit-1, the student will be able to understand the basic Statistics.
2. After studying Unit-2, the student will be able to gain knowledge on collection of data and statistical survey.
3. After studying Unit-3, the student will be able to understand the Sampling methods
4. After studying Unit-4, the student will be able to understand the Descriptive Statistics.
5. After studying Unit-5, the student will be able to gain knowledge on correlation and regression analysis.

| Unit | I. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | YES | YES | YES | YES | NO | NO |
| 2 | YES | YES | YES | YES | NO | NO |
| 3 | YES | YES | YES | YES | NO | NO |
| 4 | YES | YES | YES | YES | NO | NO |
| 5 | YES | YES | YES | YES | YES | YES |

**Unit – I: Introduction**
Definition of Statistics – Importance of Statistics - Origin and Growth of Statistics – Types of Statistics (Descriptive and Inferential Statistics) – Applications of Statistics – Statistics and Economics – Importance of Statistics for Economics – Statistics and Computers.

**Unit – II: Methods of Data Collection**

Data Definition – Types of Data - Quantitative Data, Qualitative Data – Primary Data - Secondary - Method of Data Collection – Presentations of Data ( Tables and Different types of Graphs and charts -  Frequency Distribution and  Cumulative Tables and Graphs) – Planning the survey – Scope of the Survey - Specification of the Purpose Survey – Executing the Survey

**Unit – III: Sampling Methods**
Definition Population, Sample, Sampling – Sampling Techniques – Probability Sampling – Types of Probability Sampling - Methods of Probability Sampling – Advantages and Limitations of Probability Sampling – Non-Probability Sampling – Types of Non-Probability Sampling - Methods of Non-Probability Sampling – Advantages and Limitations of Non-Probability Sampling – Size of Sampling - Theoretical Basis of Sampling

**Unit – IV: Descriptive Statistics**
Descriptive Statistics – Measures of Central Tendency – Mean – Median – Mode – Uses of various Measures of Average – Merits – Limitations - Spread of a Distribution - Measures of Dispersion- Range -  Variance - Quartile -  Mean Deviation - Standard Deviation –Coefficient of Variation - Merits – Limitations – Skewness – Moments – Kurtosis

**Unit –V:  Correlation and Regression Analysis**
Scatter Diagram – Correlation Definition – Significance of Correlation – Causation – Types of Correlation – Methods of Correlation – Uses of Correlation – Regression Definition – Uses of Regression Analysis – Regression Equation – Difference between Correlation and Regression analysis – Limitations of Regression Analysis – List of Formulae

## Text Books

1. **Unit-1:** S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi and Spiegel, M.R. (1992), Theory and Problem of Statistics, McGraw Hill Book Co., London.

2. **Unit-2:** S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi.

3. **Unit-3:** S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi and Prof. A.L. Nagar and R.K. Das. `Basic Statistics', Oxford University Press, New Delhi.

4. **Unit-4:** S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi and Seymour Lipschutz and John J, Schiller (1999), Introduction to Probability and Statistics, Schaum's Outlines, McGraw – Hill International Editions.

5. **Unit-5:** S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi and Miller, I. and Miller, Marylees. John E. Freund's Mathematical Statistics with Application, 7th ed., New Jersey: Prentice Hall, 2010.

# THIRUVALLUVAR UNIVERSITY VELLORE, 632 115

# M.A. ECONOMICS - 2022 – 2023 onwards

## SEMESTER – I I

## PAPER TYPE: CORE

## PAPER –

## STATISTICS FOR ECONOMICS II

**Course Objectives:**

1. To impart the knowledge on Probability theorems.
2. The course will mainly emphasize on the different sampling distribution.
3. To develop detailed understanding on testing of hypothesis.
4. To encouragestudents to analyze economic indicators with the help of statistics.
5. To make students to apply different statistical tools on research projects.
6. To understand the role of statistics in day today life.

**Course Outcomes (five outcomes for each units should be mentioned)**

1. After studying Unit-1, the student will be able to understand the various probability theorems.
2. After studying Unit-2, the student will be able to identify the Statistical tools in probability distributions**.**
3. After studying Unit-3, the student will be able to understand the Sampling distribution.
4. After studying Unit-4, the student will be able to use testing of hypothesis in research.

   5.After studying Unit-5, the student will be able to gain knowledge on analysis of variance

| Unit | I. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | YES | YES | YES | YES | NO | NO |
| 2 | YES | YES | YES | YES | NO | NO |
| 3 | YES | YES | YES | YES | NO | NO |
| 4 | YES | YES | YES | YES | NO | NO |
| 5 | YES | YES | YES | YES | YES | YES |

## Unit – I: Probability

Basics of Probability – Definitions of Outcome – Sample Space – Experiment – Events – Types of Events - Exhaustive event - Equally likely events - Mutually exclusive events - Complementary event - Simple and Compound event - Dependent event - Independent event – Problems based on

Identification of Events - Additive Law of Probability - Multiplicative Law of Probability – Bayer's Theorem – Problems based on Additive law, Multiplicative law and Bayer's theorem

**Unit – II: Probability Distributions**
Distribution Definition – Types of Distribution (Discrete, Continuous) – Random Variable – Probability Density Function - Probability Distribution Function – List of Discrete Distributions - List of Continuous Distributions - Binomial Distribution – Poisson Distribution - Exponential Distribution - Normal Distribution - Standard Normal Distribution - Properties, Simple Problem; use of Tables.

**Unit – III: Sampling Distribution and Hypothesis Tests**
Sampling Distribution Definition – Parameter -Sample Size - Sample Mean – Sample Proportion – Sample Variance – Confidence Interval – Sampling Error - Central Limit Theorem - Sampling distribution of the sample mean – Sampling distribution of the sample proportion

**Unit – IV: Hypothesis Tests for Two Populations**
Hypothesis Definition – Types of Hypothesis – Types of Error – P- Value – Level of Significance – One tailed tests – Two tailed tests – Single population – Test for Mean, Proportion and Variance – 'z'-Tests – 't'- test – 'F'- test – Chi Square Test – Basics and properties – One way Analysis of variance – Two way analysis of Variance

**Unit – V: Non Parametric Tests**
Non Parametric - Concept and Definition – Uses - Sign Test - Mann Whitney test - Wilcoxon signed rank test - Kruskal Wallis test.

## Text Books

1. Unit I: S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi and Speigal, M.R. (1992), Theory and Problem of Statistics, McGraw Hill Book Co., London.

2. Unit II: S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi.

3. Unit III: S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi.

4. Unit IV: S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi and Prof. A.L. Nagar and R.K. Das. `Basic Statistics', Oxford University Press, New Delhi.

5. Unit V: S.P. Gupta (1969) Last Edition (2017), Statistical Methods, Sultan Chand & Sons., New Delhi.

**Reference Items: Books, Journal.**

1. Seymour Lipschutz and John J, Schiller (1999), Introduction to Probability and Statistics, Schaum's Outlines, McGraw – Hill International Editions

**THIRUVALLUVAR UNIVERSITY**
**M.A. ECONOMICS**
**SYLLABUS**
**UNDER CBCS**
**COMPULSORY PAPER**
**PAPER 2**
<mark>**A. HUMAN RESOURCES DEVELOPMENT**</mark>

**Course Objectives**

1. To pinpoint the resource value of human like other resources.
2. To develop the understanding of the concept of human resource management.
3. To develop the understanding of the impact of training on the HRD.
4. To develop necessary skill set for application of various HR issues.
5. To make students understand the human resource planning and performance appraisal process.

**Course outcomes**

1. After studied unit-1, the student will be able to understand the importance of Human Resource Development.
2. After studied unit-2, the student will be able to understand the theories of HRD.
3. After studied unit-3, the student will be able to understand development of human capacity through training.
4. After studied unit-4, the student will be able to study organizational behavioural issues of HRD.
5. After studied unit-5, the student will be able to study recent trends in HRD.

| Unit | I. Remembering | ii.Under standing | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | YES | YES | YES | YES | NO | NO |
| 2 | YES | YES | YES | YES | NO | NO |
| 3 | YES | YES | YES | YES | NO | NO |
| 4 | YES | YES | YES | YES | NO | NO |
| 5 | YES | YES | YES | YES | YES | YES |

**Unit - I: Introduction**
Human Resource Development: Definition – evolution of HRD from Personnel management – Developmental perspectives of HRD – HRD at micro and macro levels – Outcomes of HRD in the National and Organizational contexts – Qualities and competencies required in a HRD professional – Development of HRD movement in India.

**Unit-II: Practices and Theories of HRD**
Concepts of HRD – Systems of HRD – Human Resource planning – Potential Appraisal - Assessment center – Performance appraisal – Career planning and Succession planning – Reinforcement theories – Cybernetic and information theories – Cognitive theories and problem solving theories – Experiential learning to attain self-development.

**Unit – III: Development of Human Capacity**
Development of Human Capacity: Concept – Attitude – Knowledge – Values – Loyalty and Commitment – Leadership development. Training and Development: Meaning and scope of training – Education and development – Importance and types of training – Effectiveness of Internal and External training. Evaluating HRD: impact and assessment of HRD.

**Unit-IV: Organizational Behaviour of HRD**
Organisational Behaviour of HRD: Meaning of Organisational development – intervention – Programmes and techniques – Behavioural modelling – Gaming – Quality of Work life – Quality of Life Programs – Team building – Grid training – Benefits of organisational development – Organizational culture – Organizational development – Review of organizational behavior.

**Unit-V: Recent trends in HRD**
Recent trends in HRD: Aims and policies of HRD - Training for trainer and HRD – Professionals – Promoting research in HRD – Significance of HRD in Corporate Sector - Impacts of developments in the other fields such as Business management, Communication, Psychology and Information technology.

## Text Books

1. Unit-1Dr. J. Jayasankar (2014), Human Resource Management, Margham Publications, Chennai.

2. Unit-2:Dr. K. Karuppiah and Dr. G. Hemapriya (2019), Thakur Publications, Chennai.

3. Unit-3:ArunMonappa, (1997), Managing Human Resources, Macmillan India Limited, NewDelhi

4. Unit-4:Batra V.P. (1998), The Economy and Human Resources, B.R. Publishing

5. Corporation, Ansari Road, Darya Ganj, New Delhi.

6. Unit-5: Lakshmanasamy T. and T.M. Srinivasan, (1997), Economics of Human

7. Behaviour, Allied Publishers, New Delhi – Chennai.

8. Human Resource Development [Paperback] Dr. Mukund Chandra Mehta, Doel

   Kar Paperback – 1 January 2020

**The Course of Study and the Scheme of Examination – M.A. ENGLISH 2022-2023**

| Sl. No. | Study Components / Course Title | | Instructional. hrs / per week | Credits | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER I** | | | | | | | | |
| 1. | **Core** | **Paper- 1** | 6 | 4 | British Poetry (Chaucer to 20th century) | 25 | 75 | 100 |
| 2. | | **Paper- 2** | 6 | 4 | American Literature | 25 | 75 | 100 |
| 3. | | **Paper- 3** | 6 | 4 | Indian Literature in English | 25 | 75 | 100 |
| 4. | | **Paper- 4** | 6 | 4 | Advanced Linguistics | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 5. | **Core Elective** | **Paper-1** | 3 | 3 | (To choose one out of 3) A. Indian Writing in Translation B. Fourth World Literature C. Folk Tale and Myth | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | |
| 6. | **Open Elective** | **Paper-1** | 3 | 3 | (To choose one out of 3) A. Literature for Social Transformation B. Green Cultural Studies C. Public Speaking and Creative Writing | 25 | 75 | 100 |
| | | | **30** | **22** | | **150** | **450** | **600** |
| **SEMESTER II** | | | | | | CIA | Uni. Exam | Total |
| 7. | **Core** | **Paper- 5** | 6 | 4 | British Drama | 25 | 75 | 100 |
| 8. | | **Paper- 6** | 6 | 4 | Translation Theory & Practice | 25 | 75 | 100 |
| 9. | | **Paper- 7** | 6 | 4 | Contemporary Literary Theory - I | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 10. | **Core Elective** | **Paper-2** | 5 | 3 | (To choose one out of 3) A. Comparative Literature B. New Literature in English. C. Subaltern Literary Studies | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | |
| 11. | **Open Elective** | **Paper-2** | 5 | 3 | (To choose one out of 3) A. Technical Writing. B. Indian Diaspora Literature C. Journalism and Mass Communication. | 25 | 75 | 100 |
| 12. | **Field Study** | | - | 2 | | 100 | - | 100 |
| 13. | **Compulsory Paper** | | 2 | 2 | **Human Rights** | 25 | 75 | 100 |
| | | | **30** | **22** | | **250** | **450** | **700** |

| | | | | | SEMESTER III | | | |
|---|---|---|---|---|---|---|---|---|
| 14. | | Paper-8 | 5 | 4 | Non- Fiction & Prose | 25 | 75 | 100 |
| 15. | | Paper-9 | 5 | 4 | Research Methodology | 25 | 75 | 100 |
| 16. | **Core** | Paper-10 | 5 | 4 | Contemporary Literary Theory - II | 25 | 75 | 100 |
| 17. | | Paper-11 | 5 | 4 | African and Canadian Writings | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 18. | **Core Elective** | Paper - 3 | 5 | 3 | **(To choose one out of 3)** A. Popular Literature B. Children's Literature C. Preparatory Exam for NET/SET/TRB – Paper II | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | |
| 19. | **Open Elective** | Paper - 3 | 5 | 3 | **(To choose one out of 3)** A. Soft Skills B Theorising Sexualities C. Preparatory Exam for NET/SET – Paper I | 25 | 75 | 100 |
| 20. | **MOOC courses** | | - | 2 | | - | - | 100 |
| | | | 30 | 24 | | **150** | **450** | **700** |
| | | | | | | | | |
| | | | | | SEMESTER IV | | | |
| 21. | | Paper-12 | 6 | 5 | World Literature in Translation | 25 | 75 | 100 |
| 22. | **Core** | Paper-13 | 6 | 4 | Shakespeare Studies | 25 | 75 | 100 |
| 23. | | Paper-14 | 6 | 4 | Single Author Study | 25 | 75 | 100 |
| 24. | **Core** | Project | 5 | 5 | Project with Viva voce | 100 (75 Project +25 viva) | | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 25. | **Core Elective** | Paper - 4 | 4 | 3 | **(To choose one out of 3)** A. Post-Colonial Studies B. Gender Studies C. English Language Teaching - Theory and Practice | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | |
| 26. | **Open Elective** | Paper - 4 | 3 | 3 | **(To choose one out of 3)** A. Film Studies B. English for Media C. Fantasy Fiction | 25 | 75 | 100 |
| | | | **30** | **24** | | **150** | **450** | **600** |
| | | | **120** | **92** | | | | **2600** |

## B. THEORISING SEXUALITIES

**SEMESTER – III**                                    **CREDITS – 3**

**CATAGORY – OPEN ELECTIVE**                **NO.OF. HOURS\WEEK – 5**

**TOTAL HOURS – 65**                          **COURSE CODE: DOEN36B**

**OBJECTIVES**

- To demonstrate an awareness of biological, social, and grammatical gender as being three different categories.
- To give a basic awareness of struggles and attainment of people with alternative sexualities in civil rights in various parts of the world
- To help the students view with skepticism the simplistic conflation of biological sex with socially and culturally conditioned gender

**UNIT PLAN**

- ❖ Defining the types of genders.
- ❖ The poetic mysticism of the female.
- ❖ The grace of feminism from the modern writers.
- ❖ Contribution of women writers on uplifting women.

**COURSE OUTCOMES – Students will be able to**

- ➢ appreciate, if not accept the viewing of gender as a continuum
- ➢ critically analyze different gender self-identification preferences such as transgender and inter-genders rather than seeing the polar genders male and female as the only 'natural' ones
- ➢ show sensitivity to the legal and social persecution faced by persons belonging to the LGBTQ or simply, Queer, community in societies across the world and view their rights as human rights
- ➢ exercise an enhanced openness and honesty when encountering/ generating discourse on matters of sexuality and gender roles
- ➢ understand the genres of theorizing sexualities in different literature.

**UNIT I: INTRODUCING SEXUALITY**                    **Teaching Hours - 15**

Sexological types: Sexual classifications, sexual development, sexual orientation, gender identity, sexual relationship, sexual activities, paraphilias, atypical sexual interests

Psychoanalytic drives: Freud and Lacan.

Bristow, Joseph, Introduction, *Sexuality: The New Critical Idiom Series*. 1997. 2<sup>nd</sup> ed.

London: Routledge, 2011.1-11, Print.

Butler, Judith. *Introduction, Bodies That Matter: On the discursive Limits of "Sex."*

London: Routledge, 1993.xi –xx

## UNIT II – POETRY                                     Teaching Hours - 15

The songs of songs – the sufi and Bhakthi Tradition – the concepts of adhavbhaav

| Shakespeare | : | Sonnet 73 That time of the year |
| Emily Dickinson | : | Her breast is fit for pearls |
| Adrienne Rich | : | Diving into the deck |
| Walt Whitman | : | The wounded Dresser |
| Siegfried Sassoon | : | The Last Meeting |

## UNIT III – PROSE                                     Teaching Hours - 14

| Manoj Nair | : | Rite of Passage |
| Chimamanda N. Adichie | : | On Monday of Last Week |
| Mukul Kesavan | : | Nowhere to Call Home |
| Shyam Selvadurai | : | Cinnamon Gardens |
| Ismat Chugtai | : | The Quilt |

## UNIT IV DRAMA                                     Teaching Hours -12

| Edward Albee | : | *Who is Afraid of Virginia Woolf* |
| Amiri Baraka | : | *Most Dangerous man in America* |

## UNIT V FICTION                                     Teaching Hours - 9

| Moses Tulasi | : | *Walking the Walk* |

## REFERENCE

1. De lauretis, Teresa, *Technologies of gender: esaay on theory, Film and Fiction,* Bloomington: Indiana Up, 1987. Print
2. Dollinmore, Jonathan, *Sexual Dissidence:Augustine to Wilde, Frued to Foucalt*, Oxford Clarendon, 1991. Print.
3. Foucault, *Micheal. A History of Sexuality, 3vol*s. Trans. Robert Hurley. New York: Vintage, 1978. Print.
4. Kapoor, Shekar, dir. *Bandit Queen*. Perf. Seema Biswas, Nirmal Pandey, Rakesh Vivek.
5. 1004. DVD. Film.
6. Mehta, Deepa, dir. *Fire*. Perf. Shabana Azmi, Nandita Das, Karishma Jhalani. 1996.DVD. Film.
7. Meht, Hansal, dir.Aligarh.Script. *Apurva* Asrani. Pref.Manoj Bajpayee and Rajkummar Rao.2016. DVD.
8. Nair, Manoj. *"Rite of Passage." Yaraana: Gay Writing from India*. Ed. Hoshang Merchant. New Delhi: Penguin, 1999.171-79. Print.

| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | M | M | M | S | S | S | S | S | S |
| CO2 | S | S | S | S | S | S | S | S | M | L |
| CO3 | S | S | S | S | S | S | M | S | S | M |
| CO4 | S | S | S | S | S | S | M | M | M | L |
| CO5 | M | M | M | S | S | S | S | S | L | S |

**PO – Programme Outcome, CO – Course outcome**

**S – Strong , M – Medium, L – Low (may be avoided)**

## C. PREPARATORY EXAM FOR NET/ SET/TRB – PAPER-I

**SEMESTER  – III**                                     **CREDITS – 3**

**CATAGORY – OPEN ELECTIVE**               **NO.OF. HOURS\WEEK – 5**

**TOTAL HOURS – 65**                              **COURSE CODE: DOEN36C**

### OBJECTIVE

- To enable students to face NET/SET and PG-TRB examinations.
- To help the students gain knowledge and assist them in gaining knowledge of the Logic and Reasoning Ability.
- To teach the students about Data interpretation.
- To inform the students of the various aspects of Information and Communication Technology.

### UNIT PLAN

- ❖ Identification of reasoning
- ❖ Deduction of logical Coherence
- ❖ Mathematical reasonings are developed.
- ❖ Error analysis are concentrated.

### COURSE OUTCOME – Students will be able to

- ➢ know about the Teaching and Research Aptitude.
- ➢ attempt the Comprehension passages and understand the Communication patterns.
- ➢ introduce to Mathematical Reasoning, Logical Reasoning and General aptitude.
- ➢ interpret the data and learn the various aspects of Information and Communication Technology.
- ➢ understand the higher education system and eligibility examinations.

**UNIT- I**                                                        **Teaching Hours - 13**

Teaching Aptitude
Research Aptitude

**UNIT- II**                                    **Teaching Hours - 13**

Comprehension

Communication

**UNIT- III**                                   **Teaching Hours - 13**

Mathematical Reasoning and Aptitude

Logical Reasoning

**UNIT- IV**                                    **Teaching Hours - 13**

Data Interpretation

Information and Communication Technology.

**UNIT- V**                                     **Teaching Hours - 13**

People, Development, and Environment

Higher Education System.

**REFERENCE**

1. Kaur, Harpeet- *NTA UGC NET/SET/JRF – Paper 1 Teaching and Research Aptitude*, Oxford Publishers. 2019.

| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | M | M | M | S | S | S | S | S | L |
| CO2 | S | S | S | S | S | S | M | M | M | L |
| CO3 | S | S | S | S | S | M | M | S | S | S |
| CO4 | S | S | S | S | S | S | S | S | M | S |
| CO5 | S | S | S | S | S | S | M | S | S | S |

**PO – Programme Outcome, CO – Course outcome**

**S – Strong , M – Medium, L – Low (may be avoided)**

## RESEARCH METHODOLOGY

**SEMESTER – III**                      **CREDITS – 4**

**CATAGORY – CORE**                **NO.OF. HOURS\WEEK – 5**

**TOTAL HOURS – 65**               **COURSE CODE: DEN32**

**OBJECTIVES**

- To help students prepare a Dissertation of their own
- To prepare students for quality research in future
- To train students in using parenthetical documentation as recommended in MLA Hand Book

**UNIT PLAN**

- ❖ To learn regarding the concept, definition and variable**.**
- ❖ Experimental Design of Independent and Dependence of Variables
- ❖ Giving an idea of Validity and Reality.
- ❖ To collect the Data and how to represent them.
- ❖ Giving the vivid Software and Paper format.

# COURE Outcomes – Students will be able to

- ➢ introduce the Definitions, Variables and Research questions, etc.
- ➢ explore the Research Design, the difference between Quantative and Qualitative Research.
- ➢ learn the Concept of Measurement.
- ➢ interpret the data and Layout of research.
- ➢ Know the usage of the sources in research.

**Unit– I**                                            **Teaching Hours - 12**

   Research and Writing

   Plagiarism and Academic Integrity

**Unit– II**                                           **Teaching Hours - 12**
   The Mechanics of Writing

**Unit– III**                                          **Teaching Hours - 13**

   The Format of the Research Paper Abbreviations

**Unit– IV**                                           **Teaching Hours - 13**

   Documentation: Preparing the list of Works Cited

**Unit– V**                                            **Teaching Hours - 15**
   Documentation: Citing Sources in the text

**REFERENCE**

1. Modern Language Assn. Of America, *"M.L.A Hand Book",* Macmillan. 8th edition.

2. Anderson, Durston & Poole, *"Thesis & Assignment Writing"*, Easter Limited, New Delhi. 1970 rpt. 1985.
3. Parsons C J, *"Thesis &Project Work",* Unwin Brothers Ltd., Gresham Press. 1973.
4. Rajanna, Busangi, *"Fundamentals of Research"*, American Studies Research Centre, 1983.
5. *Research Methodology* – C.R. Kothari

| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | S | S | M | S | S | S | S | S | M |
| CO2 | S | S | S | S | S | S | S | S | S | L |
| CO3 | S | S | S | S | M | M | M | M | S | S |
| CO4 | M | M | S | S | S | S | S | S | L | S |
| CO5 | S | S | S | S | S | S | M | M | L | S |

**PO – Programme Outcome, CO – Course outcome**

**S – Strong , M – Medium, L – Low (may be avoided)**

# THIRUVALLUVAR UNIVERSITY

# M.A. HISTORY

# SYLLABUS

# UNDER CBCS

## (With effect from 2022-2023)

**The Course of Study and the Scheme of Examination**

| Sl. No. | Study Components | | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | Course Title | | | | | CIA | Uni. Exam | Total |
| **SEMESTER I** | | | | | | | | |
| 1. | Core | Paper- 1 | 6 | 4 | Social and Cultural History of Tamil Nadu from sangam age to 1565 C.E. | 25 | 75 | 100 |
| 2. | | Paper- 2 | 6 | 4 | Social and Cultural History of India up to C.E 1526 | 25 | 75 | 100 |
| 3. | | Paper- 3 | 6 | 4 | Social and Cultural History of India from C.E. 1526 to C.E.1773 | 25 | 75 | 100 |
| 4. | | Paper- 4 | 6 | 4 | India and her Neighbours since C.E.1947 | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 5. | Core Elective | Paper-1 | 3 | 3 | (To choose one out of 3)<br>A. Intellectual History of India<br>B. Archives Keeping<br>C. Economic History of India up to 1526. C.E | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | |
| 6. | Open Elective | Paper-1 | 3 | 3 | (To choose one out of 3)<br>A. Contemporary History of Tamil Nadu from C.E.1947 to C.E. 2001<br>B. Introduction to Tourism<br>C. Constitutional History of India from C.E.1773 to C.E. 1947 | 25 | 75 | 100 |
| | | | 30 | 22 | | 150 | 450 | 600 |
| | | | | | | | | |
| **SEMESTER II** | | | | | | CIA | Uni. Exam | Total |
| 7. | Core | Paper- 5 | | 4 | Social and Cultural History of Tamil Nadu from C.E 1565 to C.E 2000 | 25 | 75 | 100 |
| 8. | | Paper- 6 | 6 | 4 | Social and Cultural History of India from C.E. 1773 to C.E. 2000 | 25 | 75 | 100 |
| 9. | | Paper- 7 | 6 | 4 | General Studies for Competitive Examinations | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 10. | Core Elective | Paper-2 | 5 | 3 | (To choose one out of 3)<br>A. Administrative History of India<br>B. Introduction to Archaeology | 25 | 75 | 100 |

| | | | | | C. Economic History of India from C.E.1526 to C.E. 1857 | | | |
|---|---|---|---|---|---|---|---|---|
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | |
| 11. | Open Elective | Paper-2 | 5 | 3 | (To choose one out of 3)<br>A. The Indian National Movement<br>B. Panchayat Raj<br>C. The Constitution of India | 25 | 75 | 100 |
| 12. | *Field Study | | - | 2 | | 100 | - | 100 |
| 13. | Compulsory Paper | | 2 | 2 | Human Rights | 25 | 75 | 100 |
| | | | **30** | **22** | | **250** | **450** | **700** |

| SEMESTER III | | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| 14. | Core | Paper- 8 | 6 | 5 | History of World Civilizations (Excluding India) – Ancient Period | 25 | 75 | 100 |
| 15. | | Paper- 9 | 6 | 4 | Historiography | 25 | 75 | 100 |
| 16. | | Paper-10 | 6 | 4 | History of Europe from C.E.1789 to C.E.1919 | 25 | 75 | 100 |
| 17. | | Paper-11 | 6 | 4 | History of the USA from C.E.1900 to C.E. 2000 | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | |
| 18. | Core Elective | Paper-3 | 3 | 3 | (To choose one out of 3)<br>a. An Introduction To Numismatics<br>b. Islamic History And Culture From C.E.500 To C.E.750<br>c. History of Modern Japan from C.E.1900 to C.E.2000 | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | |
| 19. | Open Elective | Paper-3 | 3 | 3 | (To choose one out of 3)<br>a. History of Freedom Struggle inTamil Nadu<br>b. Contemporary History Of India From C.E 1947 To C.E 2002<br>c. The Dravidian Movement sinceC.E1947 | 25 | 75 | 100 |
| 20. | **MOOC Courses | | - | 2 | | | | 100 |
| | | | **30** | **25** | | **150** | **450** | **700** |

| SEMESTER IV | | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|---|
| 21. | Core | Paper-12 | 5 | 4 | Research Methodology in History | 25 | 75 | 100 |
| 22. | | Paper-13 | 5 | 4 | History of World Civilizations (Excluding India) Medieval and Modern Period | 25 | 75 | 100 |
| 23. | | Paper-14 | 5 | 4 | International Relations since C.E 1919 | 25 | 75 | 100 |
| 24. | Core | Project | 5 | 5 | Project / Dissertation with Viva-Voce – (Compulsory) | | 100 (75 Project +25 viva) | 100 |
| **Internal Elective for same major students** | | | | | | | |
| 25. | Core Elective | Paper-4 | 5 | 3 | (To choose one out of 3)<br>a. An Introduction to Musicology | 25 | 75 | 100 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | b. Islamic History and Culture from C.E.750 to C.E.1258<br>c. History of Modern China from C.E.1900 to C.E.2000 | | | |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | |
| 26. | Open Elective | Paper-4 | 5 | 3 | (To choose one out of 3)<br>a. Contemporary History of the World<br>b. Intellectual History of Tamil Nadu<br>c. Women Development In Tamil Nadu From A.D.1900 To A.D.2000 | 25 | 75 | 100 |
| | | | 30 | 23 | | 150 | 450 | 600 |
| | | | 120 | 92 | | | | 2600 |
| | | | | | | | | |

**\* Field Study**

There will be field study which is compulsory in the first semester of all PG courses with 2 credits. This field study should be related to the subject concerned with social impact. Field and Topic should be registered by the students in the first semester of their study along with the name of a mentor before the end of the month of August. The report with problem identification and proposed solution should be written in not less than 25 pages in a standard format and it should be submitted at the end of second semester. The period for undergoing the field study is 30 hours beyond the instructional hours of the respective programme. Students shall consult their mentors within campus and experts outside the campus for selecting the field and topic of the field study. The following members may be nominated for confirming the topic and evaluating the field study report.

(i). Head of the respective department
(ii). Mentor
(iii). One faculty from other department

**\*\*Mooc Courses**

Inclusion of the Massive Open Online Courses (MOOCs) with two credits available on SWAYAM, NPTEL and other such portals approved by the University Authorities.

## PAPER - 12

## RESEARCH METHODOLOGY IN HISTORY

Objectives This paper aims to help the students to understand the methodology so as to pursue research in the field of Historical Studies.

**UNIT-I**

Definition – Meaning – Nature and Scope – Uses of History.

**UNIT-II**

Research Methodology – Selection of Topic Review of Literature, Objectives – Hypothesis – Collection of data – Types of data – classification of sources.

**UNIT-III**

Historical Criticism – External and Internal – Positive and Negative Criticism – Objectivity and Subjectivity in Using of History.

**UNIT-IV**

Questionnaire and Pilot Study – Evolution Techniques – Analyses.

**UNIT-V**

Footnotes – Importance and purpose of Footnotes – Endnotes – Bibliography – Annotated Bibliography – Appendix – Index.

**Books for Reference**

1.Reiner G.T. - History its purpose and method.

2.Collingwood, R.G. - The idea of history

3.Khan, S.A., - History and Historians of British India.

4.Majumdar, R.K.and Srivastava, A.N. – Historiography, Delhi.1975

5.Sen, S.P.(Ed) – Historians and historiography in modern Indian, 1973.

# THIRUVALLUVAR UNIVERSITY MASTER OFARTS UNDER CBCS

## (With effect from2022-2023)

The Course of study and the Scheme of Examination

| Sl.no | Study Components Course Title | Ins .hrs/ Week | Credit | Title of the paper | Maximum marks | | |
|---|---|---|---|---|---|---|---|
| | | | | | CIA | Uni Exam | Total |
| **Semester I** | | | | | | | |
| CORE | PAPER-1 | 6 | 5 | இக்காலஇலக்கியம் | 25 | 75 | 100 |
| Core | Paper-2 | 6 | 5 | அறஇலக்கியம் | 25 | 75 | 100 |
| Core | Paper-3 | 6 | 5 | தொல்காப்பியம்-எழுத்ததிகாரம் | 25 | 75 | 100 |
| Core | Paper-4 | 6 | 5 | தமிழ்பண்பாட்டுவரலாறு | 25 | 75 | 100 |
| Core elective | Paper-1 | 5 | 3 | 1.மொழியியல் அறிமகம் 2.தொல்லியல் | 25 | 75 | 100 |
| Open elective | Paper-1 | 5 | 3 | 1.இகமியல் கமிம் 2.பேச்சுக்கலை | 25 | 75 | 100 |
| | | | | | | | |
| **Semester II** | | | | | CIA | Uni Exam | Total |
| CORE | PAPER-5 | 6 | 5 | காப்பியங்கள் | 25 | 75 | 100 |
| Core | Paper-6 | 6 | 5 | பக்திஇலக்கியம் | 25 | 75 | 100 |
| Core | Paper-7 | 6 | 5 | தொல்காப்பியம் - சொல்லதிகாரம் | 25 | 75 | 100 |
| Core Elective | Paper-2 | 6 | | 1.சைவசிக்காங்கம் 2.பெண்ணியப்படைப்புகள் | 25 | 75 | 100 |
| Compulsory paper | | 4 | | Human Rights | 25 | 75 | 100 |
| Open Elective | Paper-2 | 6 | 3 | 1.ஊடகத்தமிழ் 2.நாடகத்தமிழ் | 25 | 75 | 100 |
| Field study | | | 2 | | 100 | - | 100 |
| **Semester III** | | | | | CIA | Uni Exam | Total |
| Core | Paper–8 | 6 | 5 | சங்கஇலக்கியம் (அகம்) | 25 | 75 | 100 |
| Core | Paper–9 | 6 | 5 | ஆராய்ச்சி நெறிமுறைகள் | 25 | 75 | 100 |
| Core | Paper–10 | 6 | 5 | தொல்காப்பியம் - பொருளதிகாரம் | 25 | 75 | 100 |
| Core Elective | Paper–3 | 6 | 3 | 1.சிற்றிலக்கியம் 2. தமிழ் இலக்கண வரலாறு | 25 | 75 | 100 |
| Open elective | Paper–3 | 6 | 3 | 1.பயன்பாட்டுநாட்டிப்பாவியல் 2. அறிவியல் தமிழ் | 25 | 75 | 100 |
| Mooc course | | | 2 | | | | 100 |

| **Semester IV** | | | | | CIA | Uni Exam | Total |
|---|---|---|---|---|---|---|---|
| Core | Paper-11 | 6 | 5 | சங்க இலக்கியம் புறம் | 25 | 75 | 100 |
| Core | Paper-12 | 6 | 5 | தொல்காப்பியம் - பொருளதிகாரம் | 25 | 75 | 100 |
| Core | Project compulsory | | 7 | Project with viva voce | | | 100 |
| Core Elective | Paper-4 | 5 | 3 | 1.இந்தியத்தத்துவங்கள் 2.கணினியும் தமிழும் | 25 | 75 | 100 |
| Open Elective | Paper–4 | 5 | 3 | 1.திருவள்ளுவம் 2. இளங்கோவடிகள் | 25 | 75 | |
| | | 120 | 92 | | | | |

# THIRUVALLUVAR UNIVERSITY
## MASTER OF COMMERCE
## SYLLABUS
## UNDER CBCS
### (With effect from 2022-2023)

## The Course of Study and the Scheme of Examination

| Sl. No. | Study Components / Course Title | | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER I** | | | | | | | | |
| 1. | Core | Paper- 1 | 6 | 4 | Advanced Financial Management | 25 | 75 | 100 |
| 2. | | Paper- 2 | 6 | 4 | Accounting for Managerial Decision | 25 | 75 | 100 |
| 3. | | Paper- 3 | 6 | 4 | Marketing Management | 25 | 75 | 100 |
| 4. | | Paper- 4 | 6 | 4 | Advanced Business Statistics | 25 | 75 | 100 |
| | | | Internal Elective for same major students | | | | | |
| 5. | Core Elective | Paper-1 | 3 | 3 | (To choose one out of 3) A. Business Environment B. Computer Application in Business C. Managerial Economics | 25 | 75 | 100 |
| | | | External Elective for other major students (Inter/multi disciplinary papers) | | | | | |
| 6. | Open Elective | Paper-1 | 3 | 3 | (To choose one out of 3) A. Principles of Marketing B. Elements of Insurance C. Corporate Social Responsibility | 25 | 75 | 100 |
| | | | **30** | **22** | | **150** | **450** | **600** |
| **SEMESTER II** | | | | | | CIA | Uni. Exam | Total |
| 7. | Core | Paper- 5 | 6 | 4 | Corporate Laws | 25 | 75 | 100 |
| 8. | | Paper- 6 | 6 | 4 | Human Resource Management | 25 | 75 | 100 |
| 9. | | Paper- 7 | 6 | 4 | Advanced Corporate Accounting | 25 | 75 | 100 |
| | | | Internal Elective for same major students | | | | | |
| 10. | Core Elective | Paper-2 | 5 | 3 | (To choose one out of 3) A. Export and Import Management B. Global Marketing C. E-Commerce | 25 | 75 | 100 |
| | | | External Elective for other major students (Inter/multi-disciplinary papers) | | | | | |
| 11. | Open Elective | Paper-2 | 5 | 3 | (To choose one out of 3) A. Principles of Management B. Elements of Accounting C. Elements of Business Law | 25 | 75 | 100 |
| 12. | Field Study | | - | 2 | | 100 | - | 100 |
| 13. | Compulsory Paper | | 2 | 2 | Human Rights | 25 | 75 | 100 |
| | | | **30** | **22** | | **250** | **450** | **700** |
| **SEMESTER III** | | | | | | CIA | Uni. Exam | Total |
| 14. | Core | Paper- 8 | 5 | 4 | Goods & Services Tax (GST) | 25 | 75 | 100 |
| 15. | | Paper- 9 | 5 | 4 | Organisational Behaviour | 25 | 75 | 100 |
| 16. | | Paper- 10 | 6 | 4 | Advanced Cost Accounting | 25 | 75 | 100 |
| 17. | | Paper-11 | 6 | 4 | Research Methodology | 25 | 75 | 100 |
| | | | Internal Elective for same major students | | | | | |
| 18. | Core Elective | Paper -3 | 4 | 3 | (To choose one out of 3) A. Agri Business Management B. Services Marketing C. Business Analytics | 25 | 75 | 100 |
| | | | External Elective for other major students (Inter/multi-disciplinary papers) | | | | | |

| | | | | | | CIA | Uni. Exam | Total |
|---|---|---|---|---|---|---|---|---|
| 19. | Open Elective | Paper -3 | 4 | 3 | (To choose one out of 3)<br>A. Small Business Management<br>B. Banking Theory<br>C. Stress Management | 25 | 75 | 100 |
| 20. | MOOC Course | | - | 2 | | - | - | 100 |
| | | | **30** | **24** | | **150** | **450** | **700** |
| | | | | | | | | |

| **SEMESTER IV** | | | | | | CIA | *Uni. Exam* | *Total* |
|---|---|---|---|---|---|---|---|---|
| 21. | | Paper- 12 | 6 | 4 | Direct Taxes | 25 | 75 | 100 |
| 22. | Core | Paper- 13 | 6 | 4 | Investment & Portfolio Management | 25 | 75 | 100 |
| 23. | | Paper- 14 | 5 | 5 | Project Development | 25 | 75 | 100 |
| 24. | Core | Project | 5 | 5 | Project With Viva voce | 100 (75 Project +25 viva) | | 100 |
| Internal Elective for same major students | | | | | | | | |
| 25. | Core Elective | Paper 4 | 5 | 3 | (To choose one out of 3)<br>A. Financial Services<br>B. Information Technology in Business<br>C. Entrepreneurial Development | 25 | 75 | 100 |
| External Elective for other major students (Inter/multi-disciplinary papers) | | | | | | | | |
| 26. | Open Elective | Paper 4 | 3 | 3 | (To choose one out of 3)<br>A. Office Management<br>B. Business Organisation<br>C. Principles of Auditing | 25 | 75 | 100 |
| | | | **30** | **24** | | **150** | **450** | **600** |
| | | | | 92 | | | | **2600** |
| | | | | | | | | |

**Semester: I,**        **Paper type: Core Elective paper**       **Paper code…….**

**Name of the Paper:** <u>C. MANAGERIAL ECONOMICS</u>       **Credit: 3**

**Total Hours per Week: 3 Hrs, Lecture Hours: 3hrs. Tutorial Hours: Nil. Practical Hours: Nil**

………………………………………………………………………………………………

**Course Objectives**

1. To make the students to understand the theories of managerial economics and factors.

2. To expand the awareness of Demand analysis and Forecasting

3. To facilitate the students to understand the law of variable proportions, product function and cost function

4. To bring subject knowledge on Economics of size and capacity Utilization and market structure pricing.

5. To let students to be acquainted with the subject of Business cycle and Policies.

**Course Outcomes:**

1. After studied Unit-1, the student will be able understand the theories of managerial economics and factors.

2. After studied Unit-2, the student will be able to develop an idea about Demand analysis and Forecasting.

3. After studied Unit-3, the student will be able to provide an idea regarding law of variable proportions, product function and cost function.

4. After studied Unit-4, the student will be able to make them aware about the Economics of size and capacity Utilization and market structure pricing.

5. After studied Unit-5, the student will be able to acquire the knowledge about be Business cycle and Policies

**Matching Table**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | Yes | Yes | Yes | Yes | Yes | No |
| 2 | Yes | Yes | Yes | Yes | Yes | No |
| 3 | Yes | Yes | Yes | Yes | Yes | No |
| 4 | Yes | Yes | Yes | Yes | Yes | No |
| 5 | Yes | Yes | Yes | Yes | Yes | No |

**UNIT-1: - Introduction of Managerial Economics**       **Teaching Hours:  9Hrs**

Definition and scope of the subject-fundamental concepts and Methods-firm's objectives and the role of managerial economist.

**Semester: II,**  **Paper type: Core Paper**  **Paper code…….**

**Name of the Paper:**<u>HUMAN RESOURCE MANAGEMENT</u>  **Credit: 4**

**Total Hours per Week: 6 Hrs, Lecture Hours: 6hrs. Tutorial Hours: Nil. Practical Hours: Nil**

………………………………………………………………………………………………………

**Course Objectives**

1. To make students to understand the basic concepts of Human Resource Management.

2. To expand the understanding of the Recruitment and Selection Procedure

3. To facilitate the students to be thoughtful about the Grievances procedure

4. To express to students the methods of Performance Appraisal

5. To let to know students about the Techniques of Training.

**Course Outcomes:**

1. After studied Unit-1, the student will be able to understand the concepts of Human Resource Management

2. After studied Unit-2, the student will be able to understand Recruitment and Selection Procedure

3. After studied Unit-3, the student will be able to know the various ways of solving the employee grievances procedure.

4. After studied Unit-4, the student will be able to know the evaluation the methods of Performance Appraisal

5. After studied Unit-5, the student will be able to evaluate the Different Techniques of Training.

**Matching Table**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | Yes | Yes | Yes | Yes | Yes | No |
| 2 | Yes | Yes | Yes | Yes | Yes | No |
| 3 | Yes | Yes | Yes | Yes | Yes | No |
| 4 | Yes | Yes | Yes | Yes | Yes | No |
| 5 | Yes | Yes | Yes | Yes | Yes | No |

**UNIT- 1: - Introduction**                                    **Teaching Hours: 18Hrs**

HRM- Nature and Scope – Functions of HRM – Functions of HR Manager - development of the human potential - Link between organization planning and HR planning.

**UNIT- 2: - Recruitment and SelectionTeaching Hours: 18Hrs**

Acquisitions and Maintenance of Personnel - Recruitment and Selection - Purposes and methods of Recruitment and Selection - Maintenance of Personnel - Motivation for increased productivity - QWL.

**Semester: III,**        **Paper type: Core Paper**       **Paper code…….**

**Name of the Paper: <u>GOODS & SERVICES TAX (GST)</u>**      **Credit: 4**

**Total Hours per Week: 6 Hrs, Lecture Hours: 6hrs. Tutorial Hours: Nil. Practical Hours: Nil**

……………………………………………………………………………………………………

**Course Objectives**

1. To gain expert knowledge on the principles and law relating to Indirect Taxation and GST in India.
2. To expose the students with the latest development in GST.
3. To impart skill in applying and analysing the provisions of Goods and Service Tax Act.
4. To know about the basic Administration of GST.
5. To Familiarize the Provisions to appeal in the court.

**Course Outcomes**

1. The students will able to know and familiarize with the fundamentals of Taxation.

2. The students will able to know GST and its history of GST and their types.

3. The students will able to know the exempted goods and Services under GST Act.

4. The students will able to know the Administration of GST and Authority.

5. The students will able to know how to avail the Appeal and Revision under GST

**Matching Table (Put Yes / No in the appropriate box)**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | Yes | Yes | Yes | Yes | No | No |
| 2 | Yes | Yes | Yes | Yes | Yes | No |
| 3 | Yes | Yes | Yes | Yes | No | No |
| 4 | Yes | Yes | Yes | Yes | Yes | No |
| 5 | Yes | Yes | Yes | Yes | Yes | Yes |

| **UNIT – 1: - Introduction** | **Teaching Hours: 18Hrs** |
|---|---|

Meaning and Definition of Indirect Taxes-Nature-Scope Constitutional Provisions-Advantages-Disadvantages-Difference between Direct and Indirect Taxes- Types-Milestones in the history of Indirect Taxation in India - Goods & Services Tax (GST) Act 2016-Introduction - Meaning- Definition-Major Indirect Taxes merged in to Goods and Service Tax.

| **UNITT – 2: - Basic Provisions of GST** | **Teaching Hours: 18Hrs** |
|---|---|

Introduction--Historical backdrop of Goods and Service Tax-objectives & features - Strengths, Weaknesses, Opportunities and Challenges (SWOC) Analysis of GST in India. –

Advantages & Limitations of GST-Economy, Industry and trade, tax payers-Types of GST -
CGST-IGST-SGST- UTGST Schedules-Rate of GST- Tamil Nadu GST Provisions.

| UNITT – 3: - Main Provisions of GST | Teaching Hours: 18Hrs |
| --- | --- |

Provisions Compensation (GST) Law-Definitions of important terms-Levy of Tax-
Collection-relating to Place, Time and Value of Supply-Different meaning of supply-
Composite Supply Mixed supply- Scope of Supply- Taxable Supply- E-Commerce-
SupplyChain, GST Exemption limit-Tax Invoice-Credit and Debit Notes-Valuation Rules-
Computation Tax Input tax Credit (ITC)-Registration-procedures-Deemed Registration-
Cancellation of Registration. Accounts and Records- Period of Retention of Records-
Presumption as to Documents-Returns- Annual-Final-Payment of Tax-Information
Technology in GST Audit- Special Audit-Assessment-Refund-Consumer welfare Fund-GST
Per actioners - TDS/TCS

| UNITT – 4: - Administration of GST | Teaching Hours: 18Hrs |
| --- | --- |

GST Council-Authorities-Inspection-search seizure-Arrest-Demand-Recovery-Liability to
pay tax in certain cases-Advance Ruling- Authority and Appellate Authority - GSTN-
Information infrastructure for GST.

| UNIT – 5: - Appeals& Revisions under GST | Teaching Hours: 18Hrs |
| --- | --- |

Appeals-Appeal to High Court Appeal to Supreme Court- Revisions-Offences- Compounding
of Offences-Penalty Transitional provisions-IGST Provisions- Inter-state Supply- Intra-state
supply- Zero rated Supply- Imported Supply- Transfer of ITC-Compensation Rules- Base
year Revenue-Projected Revenue-Miscellaneous Provisions-Interest-Job Work Procedure
Deemed Export.

**Text Books:**

1. Goods and Services Tax, Dr. H.C. Mehrotra and V.P. Agarwal, Sahitya Bhawan
   Publications, Agra.
2. GST- A Brief Introduction, L.V.R. Prasad and G.J. Kiran Kumar, PK Publishers.
3. Indirect Taxes- Dr.H.CMehrotra& Prof. Agarwal, SahityaBhavanPublishers,Agra.
4. GST Law & Procedure, Anandaday Misra, Taxman
5. Hand Book of GST in India Concepts and Procedures(2017Edition)
   RakeshGarg&SandeepGarg - Bloomsbury India Publications

**Reference Book**

1. GST in India-RakeshGarg&SandeepGarg, Bloomsbury IndiaPublications
2. All about GST-V.S Datey-Taxman Publications.
3. GST Law, Concept & Impact Analysis-Dr.SanjivAgarwal
4. GST Law & Analysis with Conceptual Procedure-Bimal Jain
   &IshaBensalYoungGlobal.

5. GST Bare Acts, Rules, Notifications &Circulars

**Mapping with Programme Outcomes**

| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | M | M | M | S | M | M | S | S | M |
| CO2 | S | M | S | S | M | S | S | M | S | M |
| CO3 | M | S | M | S | S | S | M | M | M | S |
| CO4 | S | M | S | M | S | S | M | S | S | M |
| CO5 | S | S | S | S | M | M | M | M | S | S |

PO – Programme Outcome, CO – Course outcome S – Strong, M – Medium, L – Low (may be avoided)

**Semester: III,**        **Paper type: Core Paper**        **Paper code…….**

**Name of the Paper:** <u>ORGANISATIONAL BEHAVIOUR</u>      **Credit: 4**

**Total Hours per Week: 6 Hrs, Lecture Hours: 6hrs. Tutorial Hours: Nil. Practical Hours: Nil**

-----------------------------------------------------------------------------------------------------------------

**Course Objectives**

1. 1. To understand the basic concepts of organizational behaviour.
2. To bring an understanding on different types of motivational theories
3. To facilitate the students to know the stress management
4. To let to know students to organisational structure and organisational Effectiveness

**Course Outcome**

1. After studying studied Unit-1 students will be able to understand the basic concept of organisational behaviour and foundations of individual behaviour.
2. After studying Unit -1 students will be able to have a idea about Personality, Stages of personality, perception, learning, attitudes, values and emotions.
3. After studying Unit-2 student will be able to develop an idea about different motivational theories and evaluate motivational strategies used in a variety of organizational settings.
4. After studying Unit-2 students will be able to understand motivation, morale, organisational citizenship behaviour.
5. After studying Unit-3 student will be able to understand the foundation of group dynamics.
6. After studying Unit-3 student will be able to understand work stress, stress management and coping strategies of stress.
7. After studying Unit-4, the student will be able to evaluate the appropriateness of various leadership styles and how to deal with organisational conflict.
8. After studying Unit-4, the student will be able to remember the concepts of organisational conflicts, stages, sources, types and conflict management.
9. After studying Unit-5, the student will be able to understand different types of organizational structures and importance of organizational effectiveness.
10. After studying Unit-5, the student will be able to understand organisational effectiveness & performance and organisational ethics

**Matching Table (Put Yes / No in the appropriate box)**

| Unit | i. Remembering | ii. Understanding | iii. Applying | iv. Analyzing | v. Evaluating | vi. Creating |
|------|----------------|-------------------|---------------|---------------|---------------|--------------|
| 1 | Yes | Yes | Yes | Yes | Yes | No |
| 2 | Yes | Yes | Yes | Yes | Yes | No |
| 3 | Yes | Yes | Yes | Yes | Yes | No |
| 4 | Yes | Yes | Yes | Yes | Yes | No |
| 5 | Yes | Yes | Yes | Yes | Yes | No |

# THIRUVALLUVAR UNIVERSITY
# MASTER OF SOCIAL WORK
## DEGREE COURSE UNDER CBCS
## (With effect from 2022-2023)
### The Course of Study and the Scheme of Examination

| Sl. No. | Study Components | | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | Course Title | | | | | CIA | Uni. Exam | Total |
| **SEMESTER I** | | | | | | | | |
| 1 | Core | | 4 | 3 | Social Work Profession and Practice | 25 | 75 | 100 |
| 2 | Core | | 4 | 3 | Social Work practice with Individuals | 25 | 75 | 100 |
| 3 | Core | | 4 | 3 | Social Work practice with Groups | 25 | 75 | 100 |
| 4 | Core Practical | | 15hrs. /week | 5 | Concurrent Field Work-I | 40 | 60 | 100 |
| Internal Elective for same major students (Choose any one) | | | | | | | | |
| 5 | **@ Core Elective** | **Paper-1** | 4 | 3 | A. Sociology for Social Work practice B.Social Development : Theories and Perspectives C.Civil Society and Governance | 25 | 75 | 100 |
| External Elective for other major students (Inter/multi-disciplinary papers) | | | | | | | | |
| 6 | **@ Open Elective** | **Paper-1** | 4 | 3 | A. Environmental Social Work B. Social Entrepreneurship C. Project Management | 25 | 75 | 100 |
| | | | | **20** | | | | |
| | | | | | | | | |
| **SEMESTER II** | | | | | | CIA | Uni. Exam | Total |
| 7 | Core | | 4 | 3 | Social Work practice with Communities | 25 | 75 | 100 |
| 8 | Core | | 4 | 3 | Social Work Research and Statistics | 25 | 75 | 100 |
| 9 | Core | | 4 | 3 | Social Welfare Administration | 25 | 75 | 100 |
| 10 | Core practical | | 15hrs. /week | 6 | Concurrent Field Work-II | 40 | 60 | 100 |
| Internal Elective for same major students (Choose any one) | | | | | | | | |
| 11 | **@ Core Elective** | **Paper-2** | 4 | 3 | A. Psychology for Social Work practice B.Human Growth and Personality Development C. Perspectives in Psychology | 25 | 75 | 100 |
| External Elective for other major students (Inter/multi-disciplinary papers) | | | | | | | | |
| 12 | **@ Open Elective** | **Paper-2** | 4 | 3 | A.Theory and practice in counselling B. Peace building and conflict mitigation Personaland Professional | 25 | 75 | 100 |

| S. No. | Study Components | | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | Course Title | | | | | CIA | Uni. Exam | Total |
| | | | | | Development | | | |
| 13 | @ *Field Study | | | 2 | | 100 | - | 100 |
| 14 | @ Compulsory Paper | | 2 | 2 | Human Rights & Duties | 25 | 75 | 100 |
| | | | | | | | | |
| | | | | | Summer Placement (optional) | | | |
| | | | 30 | 25 | | | | |

| S. No. | Study Components | | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | Course Title | | | | | CIA | Uni. Exam | Total |
| SEMESTER III | | | | | | | | |
| 15 | Core | | 4 | 4 | Human Resource Management(HRM)/Rural Community Development (CD)/Psychiatric Social Work Practice (MPSW) | 25 | 75 | 100 |
| 16 | Core | | 4 | 4 | Labour Legislations and Labour Welfare (HRM)/Urban Community Development(CD)/Medical Social Work(MPSW) | 25 | 75 | 100 |
| 17 | Core | | 4 | 3 | Computer Applications in Social Work | 25 | 75 | 100 |
| 18 | Core Practical | | 15hrs. /week | 6 | Concurrent Field Work-III | 40 | 60 | 100 |
| Internal Elective for same major students (Choose any one) | | | | | | | | |
| 19 | @ Core Elective | Paper-3 | 4 | 3 | A. Social Policy & Social Legislations B.Social Justice & Human Rights C.Social Policy &Planning | 25 | 75 | 100 |
| External Elective for other major students (Inter/multi-disciplinary papers) | | | | | | | | |
| 20 | @ Open Elective | Paper-3 | 4 | 3 | A.Understanding Marginalities B. Gender development C. Child Rights and Action | 25 | 75 | 100 |
| 21 | @ **MOOC Courses | | - | 2 | | | | |
| | | | 30 | 25 | | | | |
| SEMESTER IV | | | | | | CIA | Uni. Exam | Total |
| 22 | Core | | 4 | 3 | Organization Behavior(HRM)/Development Strategies(CD)/Clinical Social Work Practice (MPSW) | 25 | 75 | 100 |
| 23 | Core | | 4 | 3 | Industrial Relations(HRM)/Livelihood and Social Audit (CD)/Therapeutic Interventions in Social Work(MPSW) | 25 | 75 | 100 |
| 24 | Core Practical | | | 5 | Concurrent Field Work-IV | 40 | 60 | 100 |
| 25 | @ Core | Project Compulsory | | 5 | Project with *viva voce* | 100 (75 Project +25 | | 100 |

| | | | | | | viva) | |
|---|---|---|---|---|---|---|---|---|
| Internal Elective for same major students (Choose any one) | | | | | | | | |
| 26 | @ Core Elective | Paper-4 | 4 | 3 | A. Disaster Management<br>B. Corporate Social Responsibility<br>C. Hospital Administration | 25 | 75 | 100 |
| External Elective for other major students (Inter/multi-disciplinary papers) | | | | | | | | |
| 27 | **@ Open Elective** | **Paper-4** | 4 | 3 | A.Contemporary social work perspectives and concerns<br>b.Dynamics of Human Behaviour<br>c.Industrial Psychology | 25 | 75 | 100 |
| 28 | | | | | Block Placement (optional) | | | |
| | | | | **22** | | | | |
| | | | | **92** | | | | |

## SEMESTER III

| Course Code | PO5 SEMESTER III | HUMAN RESOURCE MANAGEMENT | L | T | P | C |
|---|---|---|---|---|---|---|
| Paper type | PAPER - 7 | | 4 | - | - | 3 |

| Course Objectives: |
|---|

The main objectives of this course are to :

1. Gain knowledge about the management of human resources
2. Gain knowledge about the management of human resource planning
3. Gain knowledge about employee retention and separation
4. Understand the programmes and activities of management of human resources
5. Acquire the skills of working with recent trends and human resource development

**Expected course outcomes:**

On the successful completion of the course, students will be able to:

| CO1 | Define, classify, summarize, infer, compare, explain fundamental ideas related to Human Resource Management | K1-K6 |
|---|---|---|
| CO2 | Discover about Human Resource Planning | K1-K6 |
| CO3 | Acquire knowledge about Employee Retention and Separation: | K1-K6 |
| CO4 | Find social work, Compensation Management | A1-A5 |
| CO5 | Actively participating, assisting in various Trends in HRM and Human Resource Development: | P1-P6 |
| CO6 | | P1-P6 |

**Matching Table**

| | i. Remembering | ii. Understanding | iii. Applying | iv.Analysing | V.Evaluating | vi.Creating |
|---|---|---|---|---|---|---|
| UnitI | Yes | Yes | Yes | Yes | No | No |
| Unit II | Yes | Yes | Yes | Yes | No | No |
| Unit III | Yes | Yes | Yes | Yes | No | No |
| Unit IV | Yes | Yes | Yes | | No | No |
| Unit V | Yes | Yes | Yes | Yes | No | No |

| UNIT- I: | Human Resource Management: | 8 hours |
|---|---|---|

**Human Resource Management**: Concept, role and importance as part of general management – Personnel Management

Vs Human Resource Management - objectives and Functions of HRM - Evolution of HRM – HRM in Service and Manufacturing Organisations: Industry, Hospital, Hotel, Shops and Establishments, Software Industry and Service Organisations.

| UNIT- II: | Human Resource Planning | 12hours |
|---|---|---|

**Human Resource Planning:** Concept and process of Human Resource planning – Recruitment and selection. Selection Process: Application Blank, Written Test, Group Discussion, Essentials of a good Curriculum Vitae, Interviewing techniques and skills, Types of Interviews, Offer Letters, References, Medical Check-ups; Induction and Placement; Job design, job analysis, Job descriptions, Job classification and Job evaluation. Sources of manpower supply: On-Campus, Off-Campus, Referrals, Consultancies, Internal Mobility, Employee outsourcing.

| UNIT- III: | Employee Retention and Separation: | 12hours |
|---|---|---|

**Employee Retention and Separation**: Attrition and Retention - Concept and Problems. Causes of Job Hopping. Leave Management: Types of Leave. Disciplinary procedures: Concept of Charge Sheet, Domestic enquiry. Grievance Redressal Procedures; Performance Management Systems; Transfers and Promotions. Separation: Discharge, Dismissal, Resignation, Retirement, VRS, CRS; Exit Interview; Retirement Benefits.

| UNIT-IV: | Compensation Management: | 10 hours |
|---|---|---|

**Compensation Management:** Concept of Wage and Salary – Wage Theories – Types of wages – Wage Board - Wage Components - wage differentials – wage regulators – Incentive Schemes - Fringe Benefits -Employee benefit plans.

| UNIT-V: | Trends in HRM and Human Resource Development: | 8 hours |
|---|---|---|

**Trends in HRM and Human Resource Development:** Current Trends in HRM:HRIS, ERP in HRM – e-HR: e-Recruitment, e-Learning, Performance Management, e-Reward - Manager Vs. Leader - Concept of Human Relations Approach -Challenging role of human resource manager. **Human Resource Development** : concept, meaning, functions, HRD Instruments. Training and development: concept, difference, 4-steps training process (Training Need Identification, Instructional Design, Training Programme Implementation, Training Evaluation). Formal Employee Training Methods (on the job training and off the job training methods). Methods of evaluating training effectiveness.

**Internal assessment methods**

Class test, organizing skill, self-gained abilities, evidence based social work at home town

**Text books**

1. Premavathy N. 2011. Human Resource Management and Development. Sri Vishnu Publications. Chennai.

Flippo Edwin B(1984) personnel management . McGraw-Hill international Edition New Delhi

**Reference books**

1. Aswathappa K. 2011. Human Resource Management Publishing by Tata Mc Graw Hill Education Pvt. Ltd.
2. Dessler Gary, Biji Varkkey. 2012. Human Resource Management. Dorling Kindersley Publishing Company.

3.   Jeffrey A Mello. 2011. Strategic Human Resource Management. Cengage Learning India.

4.   Michal J Kavanagh & Mohan Thite. 2010. Human Resource Information System. Sage Publications India Pvt Ltd.

5.   Uday kumar haldar. Human resource management. 2010. Published in India by oxford university press.

**E-Materials**

1.   www.mca.gov.in

2.   www.esic.nic.in

3.   www.epfindia.com

4.   www.labour.nic.in

5.   www.lawmin.nic.in

**Online Contents**

1. https://youtu.be/JVNgVewS2kc

2. https://youtu.be/LtaCmORiP9A

3. https://youtu.be/Y8kX0ZyUOBs

4. https://youtu.be/06hfW8I-p34

5. https://youtu.be/lJRqCe2oY3s

**Mapping with programme outcomes**

| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO9 | P010 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | M | S | S | M | S | M | S | S | S | M | M |
| CO2 | S | M | S | S | M | S | S | M | M | S | S |
| CO3 | S | S | M | S | M | S | M | S | S | M | M |
| CO4 | M | S | M | S | M | S | M | S | M | S | S |
| CO5 | S | M | S | M | S | M | S | S | M | S | S |

# THIRUVALLUVAR UNIVERSITY
## MASTER OF SCIENCE
## M.Sc. CHEMISTRY
## DEGREE COURSE
### UNDER CBCS
### With effect from 2022-2023

## The Course of Study and the Scheme of Examinations

| S. No. | Study Components / Course Title | | Ins. Hrs/ week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| **SEMESTTER I** | | | | | | CIA | Uni. Exam | Total |
| 1. | Core Theory | Paper-1 | 4 | 4 | Organic Chemistry- I | 25 | 75 | 100 |
| 2. | Core Theory | Paper-2 | 4 | 3 | Inorganic Chemistry- I | 25 | 75 | 100 |
| 3. | Core Theory | Paper-3 | 4 | 3 | Physical Chemistry- I | 25 | 75 | 100 |
| | Core Practical | Paper-1 | 4 | 0 | Organic Chemistry Practical- I | - | - | - |
| | Core Practical | Paper-2 | 4 | 0 | Inorganic Chemistry Practical- I | - | - | - |
| | Core Practical | Paper-3 | 4 | 0 | Physical Chemistry Practical- I | - | - | - |
| **Internal Elective for same major students** | | | | | | | | |
| 4. | **Core Elective** | Paper-1 | 3 | 3 | (to choose 1 out of 3) A. Advanced Polymer Chemistry B. Heterocyclic Chemistry C. Materials Chemistry | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | |
| 5. | **Open Elective** | Paper-I | 3 | 3 | (to choose 1 out of 3) A. Chemistry in Agriculture B. Food Chemistry C. Industrial chemistry-I | 25 | 75 | 100 |
| | | | **30** | **16** | | **125** | **375** | **500** |
| | | | | | | | | |
| **SEMESTER II** | | | | | | CIA | Uni. Exam | Total |
| 6. | Core Theory | Paper-4 | 3 | 3 | Organic Chemistry- II | 25 | 75 | 100 |
| 7. | Core Theory | Paper-5 | 3 | 4 | Inorganic Chemistry- II | 25 | 75 | 100 |
| 8. | Core Theory | Paper-6 | 3 | 3 | Physical Chemistry- II | 25 | 75 | 100 |
| 9. | Core Practical | Paper-1 | 5 | 3 | Organic Chemistry Practical- I | 25 | 75 | 100 |
| 10. | Core Practical | Paper-2 | 5 | 3 | Inorganic Chemistry Practical- I | 25 | 75 | 100 |
| 11. | Core Practical | Paper-3 | 5 | 3 | Physical  Chemistry Practical- I | 25 | 75 | 100 |
| 12. | Compulsory paper | | 2 | 2 | Human Rights | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 13. | **Core** | Paper-2 | 2 | 3 | (to choose 1 out of 3) | 25 | 75 | 100 |

|  | **Elective** |  |  |  | A. Green Chemistry<br>B. Supramolecular and<br>  Nanochemistry<br>C. Modern Separation<br>  Techniques |  |  |  |
|---|---|---|---|---|---|---|---|---|
| **External Elective for other major students (Inter/multi disciplinary papers)** |  |  |  |  |  |  |  |  |
| 14. | **Open Elective** | Paper-II | 2 | 3 | (to choose 1 out of 3)<br>A.  Medicinal Chemistry<br>B.  Textile chemistry<br>C.  Diary Chemistry | 25 | 75 | 100 |
| 15. | Field Study |  | - | 2 |  | - | - | **100** |
|  |  |  | **30** | **29** |  | **225** | **675** | **1000** |

| **SEMESTER III** |  |  |  |  |  | **CIA** | **Uni. Exam** | **Total** |
|---|---|---|---|---|---|---|---|---|
| 16. | Core Theory | Paper-7 | 3 | 3 | Organic Chemistry- III | 25 | 75 | 100 |
| 17. | Core Theory | Paper-8 | 4 | 4 | Inorganic Chemistry- III | 25 | 75 | 100 |
| 18. | Core Theory | Paper-9 | 4 | 4 | Physical Chemistry- III | 25 | 75 | 100 |
|  | Core Practical | Paper-4 | 5 | 0 | Organic Chemistry Practical- II | - | - | - |
|  | Core Practical | Paper-5 | 5 | 0 | Inorganic Chemistry Practical- II | - | - | - |
|  | Core Practical | Paper-6 | 5 | 0 | Physical Chemistry Practical- II | - | - | - |
| **Internal Elective for same major students** |  |  |  |  |  |  |  |  |
| 19. | **Core Elective** | Paper-3 | 2 | 3 | (to choose 1 out of 3)<br>A. Scientific Research<br>  Methodology<br>B. Advanced Bioinorganic<br>  Chemistry<br>C. Advanced analytical<br>  techniques | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** |  |  |  |  |  |  |  |  |
| 20. | **Open Elective** | Paper-3 | 2 | 3 | (to choose 1 out of 3)<br>A. Industrial Chemistry-II<br>B. Science of Photography<br>C. Energy Resources | 25 | 75 | 100 |
| 21. | MOOC Courses |  | - | 2 |  | 0 | 0 | 100 |
|  |  |  | **30** | **19** |  | **125** | **375** | **600** |

| **SEMESTER IV** |  |  |  |  |  | **CIA** | **Uni. Exam** | **Total** |
|---|---|---|---|---|---|---|---|---|
| 22. | Core Theory | Pape-10 | 4 | 4 | Organic Chemistry- IV | 25 | 75 | 100 |
| 23. | Core Theory | Paper-11 | 4 | 4 | Physical Chemistry- IV | 25 | 75 | 100 |
| 24. | Core Practical | Paper-4 | 5 | 3 | Organic Chemistry Practical- II | 25 | 75 | 100 |
| 25. | Core Practical | Paper-5 | 5 | 3 | Inorganic Chemistry Practical- II | 25 | 75 | 100 |
| 26. | Core Practical | Paper-6 | 5 | 3 | Physical Chemistry Practical- II | 25 | 75 | 100 |
| 27. | **Core** | **Project** | 5 | 5 | Project with viva voce (Compulsory) | 100<br>(75 Project +25 viva) |  | 100 |

| | | | | | Internal Elective for same major students | | | |
|---|---|---|---|---|---|---|---|---|
| 28. | **Core Elective** | Paper-4 | 2 | 3 | (to choose 1 out of 3)<br>A. Inorganic Chemistry-IV<br>B. Environmental Chemistry<br><br>C. Medicinal Chemistry and Drug Design | 25 | 75 | 100 |
| | | | | | **External Elective for other major students (Inter/multi disciplinary papers)** | | | |
| 29. | **Open Elective** | Paper-4 | 2 | 3 | (to choose 1 out of 3)<br>A. Polymer and plastics<br>B. Basics of Forensic science<br>C. Health Science | 25 | 75 | 100 |
| | | | | **28** | | **175** | **525** | **800** |
| | | | | **92** | | | | **2900** |

## THIRUVALLUVAR UNIVERSITY
## MASTER OF SCIENCE
(With effect from 2022–2023)

### The Course of Study and the Scheme of Examination

@Compulsory Courses don't change this category. Number of core papers & Practical maybe changed

| Sl. No. | Study Components | | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | Course Title | | | | | CIA | Uni. Exam | Total |
| | **SEMESTER I** | | | | | | | |
| | **Core** | | 6 | 5 | Algebra-I | 25 | 75 | 100 |
| | | | 6 | 5 | Real Analysis –I | 25 | 75 | 100 |
| | | | 6 | 4 | Ordinary Differential Equations | 25 | 75 | 100 |
| | Internal Elective for same major students (Choose any one) | | | | | | | |
| | **@ Core Elective** | **Paper-1** | 6 | 3 | A. Probability Theory<br>B. Mechanics<br>C. Graph Theory | 25 | 75 | 100 |
| | External Elective for other major students (Inter/multi disciplinary papers) | | | | | | | |
| | **@ Open Elective** | **Paper-1** | 6 | 3 | A. Basic Mathematics<br>B. Mathematical Foundations<br>C. Mathematical Modeling | 25 | 75 | 100 |
| | | | **30** | **20** | | | | |
| | | | | | | | | |
| | **SEMESTER II** | | | | | CIA | Uni. Exam | Total |
| | **Core** | | 6 | 5 | Algebra-II | 25 | 75 | 100 |
| | | | 6 | 5 | Real Analysis –II | 25 | 75 | 100 |
| | | | 6 | 4 | Partial Differential Equations | 25 | 75 | 100 |
| | Internal Elective for same major students (Choose any one) | | | | | | | |
| | **@ Core Elective** | **Paper-2** | 5 | 3 | A. Mathematical Statistics<br>B. Fuzzy Set Theory<br>C. Difference Equations | 25 | 75 | 100 |
| | External Elective for other major students (Inter/multi disciplinary papers) | | | | | | | |
| | **@ Open Elective** | **Paper-2** | 5 | 3 | A. Fundamentals of Insurance<br>B. Numerical Methods<br>C. Fundamentals of Business Statistics | 25 | 75 | 100 |
| | **@ Compulsory Paper** | | 2 | 2 | **Human Rights & Duties** | 25 | 75 | 100 |
| | | | **30** | **22** | | | | |

| Sl. No. | Study Components Course Title | | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER III** | | | | | | | | |
| | **Core** | | 6 | 6 | Complex Analysis –I | 25 | 75 | 100 |
| | | | 6 | 5 | Topology | 25 | 75 | 100 |
| | | | 6 | 5 | Differential Geometry | 25 | 75 | 100 |
| Internal Elective for same major students (Choose any one) | | | | | | | | |
| | **@ Core Elective** | **Paper-3** | 6 | 3 | A. LaTeX<br>B. Discrete Mathematics<br>C. Operations Research | 25 | 75 | 100 |
| External Elective for other major students (Inter/multi disciplinary papers) | | | | | | | | |
| | **@ Open Elective** | **Paper-3** | 6 | 3 | A. Mathematical Biology<br>B. Quantitative Techniques<br>C. SCILAB | 25 | 75 | 100 |
| | **@MOOC Courses** | | - | 2 | | | | 100 |
| | **@Field Study** | | | **2** | | **100** | | **100** |
| | | | **30** | **26** | | | | |
| **SEMESTER IV** | | | | | | CIA | Uni. Exam | Total |
| | Core | | 5 | 4 | Complex Analysis –II | 25 | 75 | 100 |
| | | | 5 | 4 | Fluid Dynamics | 25 | 75 | 100 |
| | | | 5 | 5 | Functional Analysis | 25 | 75 | 100 |
| | **@ Core** | Project Compulsory | 5 | 5 | Project with *viva voce* | 100 (75 Project +25 viva) | | 100 |
| Internal Elective for same major students (Choose any one) | | | | | | | | |
| | **@Core Elective** | Paper-4 | 5 | 3 | A. Number Theory and Cryptography<br>B. Advanced Numerical Analysis<br>C. Calculus of Variations and Integral Equations | 25 | 75 | 100 |
| External Elective for other major students (Inter/multi disciplinary papers) | | | | | | | | |
| | **@ Open Elective (Non-Major)** | **Paper-4** | 5 | 3 | A. Mathematical Economics<br>B.Entrepreneurial Development<br>C. Programming in C++ | 25 | 75 | 100 |
| | | | **30** | **24** | | | | |
| | | | **120** | **92** | | | | |

# THIRUVALLUVAR UNIVERSITY
# MASTER OF SCIENCE
# M.Sc. Physics
(With effect from 2022– 2023)
## The Course of Study and the Scheme of Examination

| Sl. No. | Study Components / Course Title | | ins. hrs / week | Credit | Title of the Paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | CIA | Uni. Exam | Total |
| **SEMESTER I** | | | | | | | | |
| 1. | Core-Theory | Paper-1 | 5 | 4 | Mathematical Physics - I | 25 | 75 | 100 |
| 2. | Core-Theory | Paper-2 | 5 | 4 | Classical and Statistical Mechanics | 25 | 75 | 100 |
| 3. | Core-Theory | Paper-3 | 5 | 4 | Quantum Mechanics - I | 25 | 75 | 100 |
| | Core-Practical | Paper-1 | 4 | 0 | General Practical | 0 | 0 | 0 |
| | Core-Practical | Paper-2 | 4 | 0 | Electronics Practical | 0 | 0 | 0 |
| **Internal Elective for same major students (Choose any one)** | | | | | | | | |
| 4. | **Core Elective** | **Paper-1** | 4 | 3 | (to choose one out of 3) A. Electronic Devices and Applications B.Fiber Optic Communication C. Electronics Communication Systems | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi-disciplinary papers)** | | | | | | | | |
| 5. | **Open Elective** | **Paper-1** | 3 | 3 | (to choose one out of 3) A.Energy Physics B.Basic Physics C. Communication Physics | 25 | 75 | 100 |
| | | | **30** | **18** | | **125** | **375** | **500** |
| | | | | | | | | |
| **SEMESTER II** | | | | | | CIA | Uni. Exam | Total |
| 6. | Core-Theory | Paper-4 | 5 | 4 | Mathematical Physics - II | 25 | 75 | 100 |
| 7. | Core-Theory | Paper-5 | 4 | 4 | Electro Magnetic Theory | 25 | 75 | 100 |
| 8. | Core-Theory | Paper-6 | 4 | 4 | Quantum Mechanics - II | 25 | 75 | 100 |
| 9. | Core-Practical | Paper-1 | 4 | 4 | General Practical | 25 | 75 | 100 |
| 10. | Core-Practical | Paper-2 | 4 | 4 | Electronics Practical | 25 | 75 | 100 |
| **Internal Elective for same major students (Choose any one)** | | | | | | | | |
| 11. | Core Elective | Paper-2 | 4 | 3 | (to choose one out of 3) A.Nanoscience B.Electronics Instrumentation C. Non- linear optics | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multidisciplinary papers)** | | | | | | | | |
| 12. | **Open Elective** | **Paper-2** | 3 | 3 | (to choose one out of 3) A.Spectroscopy and Lasers B. Physics for Competitive Exams C. Analog and Digital Electronics | 25 | 75 | 100 |
| 13. | **Field Study** | | - | 2 | | 100 | - | 100 |

| 14. | Compulsory Paper | | 2 | 2 | Human Rights & Duties | 25 | 75 | 100 |
|-----|------------------|---|---|---|----------------------|----|----|-----|
| | | | 30 | 30 | | 300 | 600 | 900 |

| SEMESTER III | | | | | | CIA | Uni. Exam | Total |
|--------------|---|---|---|---|---|-----|-----------|-------|
| 15. | Core-Theory | Paper-7 | 5 | 4 | Condensed Matter Physics | 25 | 75 | 100 |
| 16. | Core-Theory | Paper-8 | 4 | 4 | Nuclear Physics | 25 | 75 | 100 |
| 17. | Core-Theory | Paper-9 | 4 | 4 | Microprocessors and Microcontrollers | 25 | 75 | 100 |
| | Core-Practical | Paper-3 | 5 | - | Advanced General Experiments | 0 | 0 | 0 |
| | Core-Practical | Paper-4 | 5 | - | Programming& Problem solving skills | 0 | 0 | 0 |
| **Internal Elective for same major students** | | | | | | | | |
| 18. | Core Elective | Paper-3 | 4 | 3 | (to choose one out of 3) A. Research methodology B. Material Science C. Numerical Methods and C programming | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi-disciplinary papers)** | | | | | | | | |
| 19. | Open Elective | Paper-3 | 3 | 3 | (to choose one out of 3) A. Electrical and Electronics Appliances B. Physics of Materials C. Geophysics | 25 | 75 | 100 |
| 20. | MOOC Courses | | - | 2 | | | | |
| | | | 30 | 20 | | 125 | 375 | 600 |

| SEMESTER IV | | | | | | CIA | Uni. Exam | Total |
|-------------|---|---|---|---|---|-----|-----------|-------|
| 21. | Core-Theory | Paper-10 | 6 | 4 | Spectroscopy | 25 | 75 | 100 |
| 22. | Core-Practical | Paper-3 | 5 | 4 | Advanced General Experiments | 25 | 75 | 100 |
| 23. | Core-Practical | Paper-4 | 5 | 4 | Microprocessor, Microcontroller & C++ Programming | 25 | 75 | 100 |
| 24. | **Core** | **Project** | 5 | 6 | Project with viva voce (Compulsory) | 100 (75 Project +25 viva) | | 100 |
| **Internal Elective for same major students** | | | | | | | | |
| 25. | **Core Elective** | **Paper-4** | 6 | 3 | (to choose one out of 3) A. Crystal Growth and Thin Films B. Medical Physics C. MATLAB and Python Programming | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multidisciplinary papers)** | | | | | | | | |
| 26. | **Open Elective** | **Paper-4** | 3 | 3 | (to choose one out of 3) A. Nanophysics B. Astrophysics C. Weather forecasting | 25 | 75 | 100 |
| | | | 30 | 24 | | 125 | 475 | 600 |
| | | | 120 | 92 | | | | 2600 |

# THIRUVALLUVAR UNIVERSITY
## MASTER OF
## SCIENCE
## M.Sc. ZOOLOGY
## DEGREE COURSE
## UNDER CBCS
### (With effect from 2020-2021)
### The Course of Study and the Scheme of Examinations

| S.No | Study Components / Course Title | | Ins. Hrs /Week | Credit | Title of the paper | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | CIA | Uni. Exam | Marks |
| **SEMESTER I** | | | | | | CIA | Uni. Exam | Marks |
| 1 | Core | Paper-1 | 5 | 4 | Life and Diversity of Invertebrates | 25 | 75 | 100 |
| 2 | | Paper-2 | 5 | 4 | Life and Diversity of Chordates | 25 | 75 | 100 |
| 3 | | Paper-3 | 5 | 4 | Cell and Molecular biology | 25 | 75 | 100 |
| 4 | Practical I | Paper-1 | 9 | | Life and diversity of Invertebrates, Life and diversityof Chordates and Cell and molecular Biology | - | - | - |
| 5 | ELECTIVE | Paper-1 | 3 | 3 | (A) Aquaculture and Farm management  (B) Biostatistics and Bioinformatics | 25 | 75 | 100 |
| 6 | OPEN ELECTIVE (Non-Major) | Paper-1 | 3 | 3 | (A) Apiculture  (B) Public Health and Hygiene | 25 | 75 | 100 |
| | | | 30 | 18 | | 125 | 375 | 500 |
| **SEMESTER II** | | | | | | CIA | Uni. Exam | Marks |
| 7 | Core | Paper-4 | 4 | 4 | Genetics | 25 | 75 | 100 |
| 8 | | Paper-5 | 4 | 4 | Environmental Biology | 25 | 75 | 100 |
| 9 | | Paper-6 | 4 | 4 | Biotechnology | 25 | 75 | 100 |
| 10 | Practical I | Paper-I | - | 4 | Life and diversity of Invertebrates, Chordates, Cell and molecular Biology. | 25 | 75 | 100 |
| 11 | | Paper-II | 10 | 4 | Genetics, Environmental Biology and Biotechnology | 25 | 75 | 100 |
| 12 | Compulsory Paper | | 2 | 2 | Human Rights | 25 | 75 | 100 |
| 13 | ELECTIVE | Paper-2 | 3 | 3 | (A) Endocrinology  (B) Bio-Chemistry | 25 | 75 | 100 |
| 14 | OPEN ELECTIVE Non-Major | Paper-2 | 3 | 3 | (A) Vermiculture  (B) Wild Life Management and Conservation | 25 | 75 | 100 |
| | | | 30 | 30 | | 225 | 675 | 900 |

|  | | | | | | | CIA | Uni. Exam | Marks |
|---|---|---|---|---|---|---|---|---|---|
| **SEMESTER III** | | | | | | | | | |
| 15. | Core Theory | Paper-7 | 4 | 3 | Animal Physiology | | 25 | 75 | 100 |
| 16. | Core Theory | Paper-8 | 4 | 3 | Developmental Biology | | 25 | 75 | 100 |
| 17. | Core Theory | Paper-9 | 4 | 3 | Immunology | | 25 | 75 | 100 |
| 18. | Core Practical | Paper-3 | 12 | - | Animal Physiology, Developmental biology and Immunology | | - | - | - |
| **Internal Elective for same major students** | | | | | | | | | |
| 19. | Core Elective | Paper-3 | 3 | 3 | **(to choose one out of 2)** (A) Bioethics and Biosafety (B) Biophysics | | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | | |
| 20. | Open Elective | Paper-3 | 3 | 3 | **(to choose one out of 2)** (A) Aquarium fish keeping (B) Medical Laboratory Technology | | 25 | 75 | 100 |
| 21. | Field Study | | | 2 | | | 25 | 75 | 100 |
| 22. | MOOC Course | | - | 2 | | | - | - | 100 |
| | | | **30** | **17** | | | **125** | **375** | **600** |
| | | | | | | | | | |
| **SEMESTER IV** | | | | | | | | | |
| 23. | Core Theory | Paper-10 | 5 | 4 | Research Methodology | | 25 | 75 | 100 |
| 24. | Core Theory | Paper-11 | 5 | 4 | Entomology | | 25 | 75 | 100 |
| 25. | Core | Project | 5 | 5 | Project with viva voce (Compulsory) | | 100(75 Project+ 25 Viva) | | 100 |
| 26. | Core Practical | Paper-3 | - | 4 | Animal Physiology, Developmental Biology and Immunology | | 25 | 75 | 100 |
| 27. | Core Practical | Paper-4 | 9 | 4 | Research Methodology and Entomology | | 25 | 75 | 100 |
| **Internal Elective for same major students** | | | | | | | | | |
| 28. | Core Elective | Paper-4 | 3 | 3 | **(to choose one out of 2)** (A)  Sericulture (B)  Microbiology | | 25 | 75 | 100 |
| **External Elective for other major students (Inter/multi disciplinary papers)** | | | | | | | | | |
| 29. | Open Elective | Paper-4 | 3 | 3 | **(to choose one out of 2)** (A) Sericulture (B) Pearl Culture | | 25 | 75 | 100 |
| | | | **30** | **27** | | | **175** | **525** | **700** |
| | | | | **92** | | | | | **2700** |

**Semester:** IV                                                      **Paper type:** Core Paper 10
**Paper code:** DZO41                          **Name of the Paper:** RESEARCH METHODOLOGY
**Credit:** 4                                                **Total Hours per Week:** 5

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**Course Objectives**

- To make the students, learning statistical and bioinformatics tools.
- To make the students, understand spectroscopic principle and application.
- To make the students, know various bio-molecule separation techniques.
- To make the students, operate various microscopes.
- To make the students, get experienced in research paper writing and publication.

## UNIT-I: BIOSTATISTICS & BIOINFORMATICS

Collection and analysis of biological data - mean, median, mode, Standard deviation, Standard error, Coefficient of variation, Student 't' test, Skewness,
Kurtosis, Chi - square, Correlation, Regression and ANOVA.
Internet - Worldwide Web - Search Engines - their functions. Boolean searching - file formats.
Biological data bases - sequence and structure – data retrieval - searching source data bases - sequence similarity searches - FASTA and BLAST, clustral and phylip.

## UNIT-II: SPECTROSCOPY

Absorption and Emission principles - Principles and applications of UV-visible, Spectroflurometer, flame photometer, Atomic Absorption and emission spectrophotometers, NMR and Mass spectrometer.

## UNIT-III: CHROMATOGRAPHY & ELECTROPHORESIS

Principles and Application of Chromatography: Paper, Thin layer, column, Ion Exchange, Gel filtration, Gas Liquid, HPLC and affinity chromatography.
Principles and Application of Electrophoresis: AGE, PAGE, 2D gel and Iso-Electric focusing.

## UNIT-IV: MICROSCOPY

Principles, construction and biological uses of phase contrast, fluorescence, scanning and transmission electron microscopes.

## UNIT-V: PREPARATION OF MANUSCRIPTS

Preparation of index cards - Reference collection - preparation of thesis - preparation of Scientific paper for publication in a Journal. Internet and e-journals. Computer aided techniques for data analysis, data presentation and power point preparation.

**Course Out Comes (five outcomes for each units should be mentioned)**
**1. After studied unit-1, the student will be learning statistical methods.**

- The student can able to works on Computers for Projects and Research.
- Student can able to understand search engines, Boolean searching, file formats etc.
- By learning data base, student can analyses the sequence similarities of the FAST and BLAST etc.

**2. After studied unit-2, the student will be able to**

- understand the different types of Spectrometers.
- They learn the principles of Nuclear Magnetic Resonance to identify the atomic elements of chemicals.

# THIRUVALLUVAR UNIVERSITY

# HUMAN RIGHTS

## COMPULSORY PAPER

## (For all PG Degree Courses)

## (with effect from 2020-2021)

### Course Objectives

1.Human Rights are the rights of all Human Beings. They have universal application. Awareness about Human Rights and concern for its protection has become an important issue after the second world war and paved way for world Nations to come together for acceptance of Universal Declaration of Human Rights.

2. The role of UN in protecting and promoting awareness of Human Rights is highly significant. The binding nature of the International Conventions and Covenants are still a dilemma. The persuasive force in case of violation of human rights by International community is an area of concern. In the absence of National legislations enforcement of these rights remain as one farce.

3. To trace the development of regional instruments drafted aiming at protection of Human Rights and its enforceability.

4.The Indian perspective of protection of Human Rights vide its Legislations , the Constitution of India more read by its language, the Fundamental rights, Duties and Directive Principles of the State Policy has been elicited. The response shown by Indian judiciary and the expression of judicial activism is highlighted. The development of Human Rights jurisprudence in India is traced.

5.The Special legislations and the enforcement machineries remain as a watch dog in the due enforcement of Human Rights in India. The duty to protect human right of all individuals more particularly those are vulnerable remains more as a National obligation. The course intents to evaluate the Redressal mechanisms practiced in India.

### COURSE CONTENTS

**UNIT-1:**

**Human rights- Concepts & Nature**

Human Rights: Meaning, Definition, Nature, Content- Legitimacy of Human Rights- Origin and Development of Human Rights- Theories – Principles of Magna Carta – Modern Movements of Human Rights – The Future of Human Rights.

**UNIT-2:**

**Human Rights – The International Perspective**

International human rights – Human Right concepts Prior and after World War II – UNO – Universal Declaration of Human Rights (UDHR) – International Covenant on Civil and Political Rights (ICCPR) – International Covenant on Economic, Social and Cultural Rights (ICESCR)- Optional Protocols- Human Right Declarations – Role of United Nation Commissions – Convention on the Elimination of All forms of Discrimination against women (CEDAW) – United Nations Convention against Torture (UNCAT) - United Nations Convention on the Rights of the Child (CRC or UNCRC) - Conventions on the Protection of the Rights of Migrant Workers and Disabled.

**UNIT-3:**

**Regional Human Rights**

European Human Rights System- African Human Rights System – International Human Rights – Enforceability before Domestic Courts.

**UNIT-4:**

**Human Rights in India**

The Constitution of India – Fundamental Rights – Right to Life and Liberty – Directive Principles of State Policy – Fundamental Duties – Individual and Group Rights – Other facets of Human Rights – Measures for Protection of Human Rights in India.

**UNIT-5:**

**Human Right Violations and Redressal Mechanism**

Human Rights – Infringement of Human Right by State Machinery and by Individual – Remedies for State action and inaction – Constitutional remedies – Public Interest Litigation (PIL) - Protection of Human Rights Act, 1993 – National Human Rights Commission – State Human Rights Commissions – Constitution of Human Right Courts

## Text Books

**Unit-1**

- Human Rights Lalit Parmar, Anmol Publications Pvt. Limited, 1998
- Human Rights In International Relations, David P. Forsythe, Cambridge University Press

**Unit-2**

- Alston, Philip, And Frederic Megret, Eds. The United Nations And Human Rights: A Critical Appraisal. Second Edition. Oxford University Press, 2014.

- Bassiouni, M. Cherif, And William A. Schabas, Eds. New Challenges For The UN Human Rights Machinery: What Future For The UN Treaty Body System And The Human Rights Council Procedures? Intersentia, 2011.
- Kruckenberg, Lena J. The Unreal World Of Human Rights: An Ethnography Of The UN Committee On The Elimination Of Racial Discrimination. Nomos Publishers, 2012.

**Unit-3**

- Rebecce Wallace, International Human Rights, Text And Materials 1997
- European Convention On Human Rights: Texts And Documents (Herbert Miehsler & Herbert Petzold Eds., 1982)
- A.H. Robertson & J.G. Merrils, Human Rights In Europe: A Study Of The European Convention On Human Rights, 386-413 (3d Ed. 1993)
- International Human Rights Law And Practice ,Francisco Forrest Martin (1997)
- R.K S Inha, Human Rights Of The World (1997)
- African Commission On Human Rights And Peoples Rights Evelyn A Ankumah, (1996)
- The Constitution of India

**Unit-4**

- Human Rights Bharatiya Values, <u>Mandagadde Rama Jois</u>,  Bharatiya Vidya Bhavan, 2015
- B P Singh Seghal , Human Rights in India 1996

**Unit-5**

- Paras Diwan and Piyush Diwan Women and Legal Protection
- Philip Alston Children Rights and the Law
- G S Bhargave and R M Pal Human Rights of Dalit Societal Violation 1999
- Geralden Van Bueren International Law and The Rights of the Child 1998
- P C Tirpathi Crime Against Working Women

## Reference Items: books, Journal

- Protection Of Human Rights Act, 1993.
- Constitutional Law of India (3 Volumes) by Seervai H.M 2015
- The Human Rights Watch Global  Report On Women's Human Rights 2000 Oxford Publication
- RS Sharma Perspectives In Human Rights Development
- Julies Stone Human Law And Human Justice 2000 Universal Publication
- Research Handbook On International Human Rights Law, Edited By Sarah Joseph & Edited By Sarah Joseph, Edward Elgar Publishing Limited USA

**Course Out Comes**

1. After studying  unit-1, the student will be able to know the nature of human rights its origin , the theories, the movements in the march of human rights and the facets of  future of human rights.

2. After studying unit-2, the student will be able to know the international dimension of human rights, the role of UN and the global effort in formulating conventions and declarations

3. After studying unit-3, the student will be able to Perceive the regional developments of human rights in Europe , Africa and Asia and the  enforceable value of human rights in international arena.

4. After studying unit-4, the student will be able to have knowledge on the human rights perspectives in India,  more developed by its constitution and special legislations

5. After studying unit-5, the student will be able to know the redressal mechanism made available in case of human rights violation confined to India.

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