Value Added Courses

Certificate Courses

COP

THIAGARAJAR COLLEGE, MADURAI–9.
PG & Research Department of English
(For those who joined B.A. English in June 2021 and after)
Programme Code – UEN

Course Code	Course Title	Category	Hours
UEN21COP1	Introduction to Fine Arts	Certificate	40

Preamble

This course emphasises on the students to understand the principles and elements of various art forms of the past and present socio-cultural milieu of the country during the process of art-making. It also focuses on exploring and expressing their ideas and concepts through painting, visual art, music, theatre, rhetoric and dance.

Course Outcomes

On the completion of the course the student will be able to

	Course Outcome	Expected Proficiency in %	Expected Attainment in %
CO1	define the basic principles and forms employed in various art forms.	70	65
CO2	understand the significance of both performing arts and visual arts.	70	65
CO3	express their thoughts and feelings through the medium of arts.	65	60
CO4	identify the area of interest that may support their portfolio or career development.	65	60
CO5	analyse the performing traditions, practices and appreciate the beauty and utility.	60	55

Unit I - Origin and Purpose of Art Forms
Definition – Division – The Origin of Arts – Importance of Art Education – Visual Art – Performing Art – Nature and Scope of Art Education – Important Art Movements of 20th century

Unit II – Painting and Visual Arts
Understanding Drawing, Painting and Sculptors – Fundamentals of Visual Arts – The Element of Visual Arts – Cinema and its Elements

Unit III – Music
Elements of Music – Music Genres – Styles – Music of the World –Classical Indian Music – Folk Music – Hindustan Music – Bollywood Music

Unit IV – Theatre and Rhetoric
Concept, Definition and Origin of Drama – Conventions and Techniques – Genres – Theatre and Drama in India Folk Theatre – Modern Theatre – Third Theatre – Art of Rhetoric – Voice Culture

Unit V – Dance
Biomechanics – Elements of Dance – Choreography – Types of Dance Styles – Classical Dance Forms –Traditional and Modern Dance – Dance Theatre

***Internal Evaluation will be based on the Practicals.**

Text

The text to be compiled by the department.

Books for Reference

Jager, T. De. and Rene M. Odendaal. *Creative Art Education*. South Africa: Van Schaik Uitgewers, 2017.

Panizo, A. and Erlinda F Rustia. *Introduction to Art Appreciation and Aesthetics: An Approach to the Humanities*. Manila: U.S.T. Cooperative, 1969.

Rynck, P. De. *How to Read a Painting: Decoding, Understanding and Enjoying the Old Masters*. Thames & Hudson Publishers, 2004.

Conti, F. and Maria Cristina Gozzoli. *Understanding Art: A Reference Guide to Painting, Sculpture and Architecture in the Romanesque, Gothic, Renaissance and Baroque Periods*. Taylor & Francis Group, 1999.

Hansen, B., David Whitehouse and Cathy Silverman. *Introduction to Music Appreciation American.* Public University System, 2014

Course Designer: Ms. S. Nivetha

Thiagarajar College (Autonomous): Madurai – 625 009
Department of Business Administration
(For those joined B.B.A on or after June 2021)
Programme Code-UBA

Course Code	Course Title	Category	Hours
UBA21COP1	MANAGERIAL SKILLS	COP	40

L- Lecture T- Tutorial P- Practical

Year	Semester	Int. Marks	Ext.Marks	Total
First	First and Second	25	75	100

Preamble

Managerial skills is a term that refers to the required competencies of the manager such as self awareness, decision – making, problem solving, time and team management skills. These skills are important for many reasons. They help to be an effective leader and problem-solver in so many situations. The course focuses on developing these skills to enhance job performance.

Course Outcomes

Sl.No	Course Outcome	Expected Proficiency	Expected Attainment
CO1	Understand the significance of managerial skills	80	80
CO2	Recognize the importance of self awareness	80	80
CO3	Comprehend the value of decision – making skills	75	85
CO4	Appreciate the significance of effective time management	75	85
CO5	Take hold of the role of problem – solver and team manager	70	85

Unit-I **8 Hours**

Managerial skills: Introduction and importance, Self-Awareness: Introduction, Concept of Self-Awareness, Importance of Self-Awareness, Strategies to Increase Self-Awareness: Self awareness wheel -Johari Window Model, Emotional Intelligence.

Unit-II **8 Hours**

Decision-Making and Problem Solving Skills: Introduction, Concept of Decision making-Importance of Decision making, Decision making Process- Challenges in the Process of Decision-Making- Concept of Problem solving-Importance of Problem-Solving Skills for Managers, Process of Problem-Solving, Challenges in Generating Creative Ideas

Unit-III **8 Hours**

Communication and presentation Skills: Concept of Communication, Types of Communication, Channels of Communication, Communication Process and the Key Elements. Presentation – Introduction - Types of Presentations, Benefits of a Successful Presentation, Subject Selection and Organizing Information-Organizing a Presentation.

Unit-IV **8 Hours**

Time Management Skills: Introduction, Concept of Time Management-Importance of Time Management, Analysis and Diagnosis of the Use of Time, Steps in Time Management, Techniques of Time Management, Hurdles to Effective Time Management

Unit-V **8 Hours**

Team Management Skills: Concept of Team Management, Cog's Ladder: Understanding Group Formation, Team Effectiveness Assessment, Team Management Techniques, Team Briefing, Management by Wandering Around (MBWA), Losada Ratio, The Broaden-and-Build Theory, Heron's Six Categories of Intervention

Text Books:

"A Guide to Managerial Skills" Compiled by the Department of Business Administration, Thigarajar college, Madurai.

Course Designers:

1. **Dr.C.Jothi Baskara Mohan**
2. **Dr.D.Anbugeetha**

Thiagarajar College (Autonomous): Madurai – 625 009
Department of Business Administration
(For those who joined B.A. /B.Sc./B.B.A. /B.Com./ B.C.A. on or after June 2021)
Programme Code-UBA

Certificate Course (w.e.f 2021 batch onwards)

Course Code	Course Title	Category	Hours
UBA21COP2	**BASIC MARKETING SKILLS**	CoP	40

Year	Semester	Int. Marks	Ext.Marks	Total
First	First and second	25	75	100

Preamble

Essential Concepts and Principles of marketing help students in understanding the basic marketing language.

Course Outcomes

On the completion of the course the student will be able to

	Course outcomes	Expected Proficiency	Expected Attainment
CO1	Students will demonstrate strong conceptual knowledge in the functional area of marketing management.	80	80
CO2	Utilize information of firm's external and internal marketing environment to identify and priorities appropriate marketing strategies.	80	80
CO3	Critically analyse an organisation's marketing ideas.	75	85
CO4	Identify the components of Marketing Mix and Designing and Implementation of Marketing Strategy	70	85
CO5	Demonstrate how knowledge consumer behaviour can be applied to marketing.	75	85

Unit – 1 **8 Hours**
Marketing – Definitions- Importance- Difference between Marketing and Selling. Functions of Marketing Executives- Basic Marketing Concepts.

Unit- 2 **8 Hours**
Marketing Environment- Meaning- Importance- Micro and Macro Environment- Types of Marketing Environment.

Unit- 3 **8 Hours**
Segmentation- Various bases of Market Segmentation- Targeting – Types of Targeting – Selection criteria for Targeting- Positioning- Bases of Positioning.

Unit – 4 **8 Hours**
Marketing Mix- Features – Types of Marketing Mix- Developing a Marketing Mix- Designing and implementing Marketing Strategy - Marketing Mix components.

Unit- 5 **8 Hours**
Consumer Behaviour- Meaning- Importance- Factors Affecting Consumer behaviour- Stages involved

in buying behaviour- Recent Trends in Marketing- Digital Marketing.

Text Books:

1. 1. Philip Kotler (2018), Principles of Marketing, By Pearson, New Delhi, ISBN- 13: 978-93-528-6561.

Reference Books:

1. Gupta C.B & Nair Rajan(2016), Marketing Management, Sultan Chand &sons ltd, New Delhi, ISBN-978-93-5161-083-0.

2. Ramaswamy V.S &Namakumari. S (2018), Marketing Management Global Perspective – Indian context, SAGE Publications India Pvt Ltd, ISBN – 978-93-52807-38-3.

3. T.N Chhabra, Ankur Chhabra, (2018) Marketing Management, Sun India Publications, ISBN - 978-93-80674-87-2.

Course Designer(s):

1. Dr.C. Jothi Baskara Mohan
2. Dr. R. Arun Prasath

THIAGARAJAR COLLEGE, MADURAI – 9.

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

Re-Accredited with 'A^{++}' Grade by NAAC

POST GRADUATE AND RESEARCH DEPARTMENT OF MATHEMATICS

(For those who joined B.A. /B.Sc./B.B.A. /B.Com./ B.C.A. on or after June 2021)

Course Code	Course Title	Category	Hours
UMA21COP1	**Quantitative Aptitude - I**	**CoP**	**40**

L - Lecture T - Tutorial P–Practicals

Year	Semester	Int. Marks	Ext. Marks	Total
First	First & Second	25	75	100

Preamble

The course aims to solve variousreal life problems using quantitative techniques within stipulated time. Also it provides various mathematical aptitude techniques for solving problems in percentage, profit and loss, problems on ages, ratio and proportion. It develops logical reasoning, thinking ability and approach the problems in different manner.

Course Outcomes

On the completion of the course the student will be able to

#	Course Outcome	Exp. Prof.	Exp. Attmt.
CO1	Recall the basic concepts in quantitative techniques and solve problems quickly.	80	60
CO2	Infer appropriate arithmetical ideas in aptitude and solve analytical problems	70	70
CO3	Analyze the problems logically and interpret the problems in a different manner.	75	70
CO4	Develop quantitative skills and solve problems simply.	80	60
CO5	Improve and enhance arithmetic ability.	85	75

Contents (60 Hours)

Unit I **(12 Hours)**

Number System – Highest Common Factor and Least Common Multiple of Numbers.

Unit II **(12 Hours)**

Decimal Fractions - Simplification.

Unit III **(12 Hours)**

Average - Problems on Numbers - Problems on Ages.

Unit IV **(12 Hours)**

Percentage - Profit and Loss - Ratio and Proportion.

Unit V **(12Hours)**

True Discount - Banker's Discount.

References:

1. Aggarwal R. S., 2017, Quantitative Aptitude for Competitive Examinations, S Chand and Company Ltd., New Delhi.
2. PraveenR. V., 2018, Quantitative Aptitude and Reasoning, PHI Learning and Private Ltd., Delhi.

Web Resources:

1. https://www.campusrecruitment.co.in/CampusRecruitmentBook.pdf
2.https://qualifygate.com/download/Placement/Aptitude.pdf

Course Designers:

1. Dr. R. Angeline ChellaRajathi 2. Ms. P. Vanmathy

Thiagarajar College (Autonomous): Madurai – 625 009
(Re-Accredited with 'A^{++}' Grade by NAAC)
Department of Botany
(For those joined B.Sc. Botany on or after June 2021)

Course Code	Course Title	Category	Hours
UBO21COP1	**Food and Nutrition**	**CoP**	**40**

L - Lecture T - Tutorial P - Practicals

Year	Semester	Int. Marks	Ext. Marks	Total
2020	**I & II**	**25**	**75**	**100**

Course Outcomes

On the completion of the course the student will be able to

#	Course Outcome	Expected Proficiency	Expected Attainment
CO1	Evaluate **Food categories and their characteristic features**	80%	70%
CO2	Explain Healthy and nutritious Plant food: Facts Advantages and Limitations	80%	60%
CO3	Demonstrate the **Healthy and nutritious Animal Based Food: Facts Advantages and Limitations**	70%	70%
CO4	Plan up **Food additives and their importance**	70%	60%
CO5	Able to analyse **Food Sustainability - Food wastage, food spoilage, food poisoning and food adulteration**	60%	80%

Unit I: Food-definition, categories and their characteristic features - Traditional food, organic foods, healthy food, Instant food, junk food, exotic food, probiotics, xenobiotics, - Dietary requirements and health - balanced diet chart; malnutrition and over eating under weight, obesity- healthy foods for weight management and food guide pyramid- Diet therapy: Therapeutics adaptations of normal diet – palaeo and warrior diet.

Unit II: Healthy and nutritious Plant food: Facts Advantages and Limitations - Plant based foods- Nutritive value - Cereal and cereal products: paddy, wheat, maize and millet; .Pulses Cereal and Health mix sprouted seeds, Oils and vegetable fats - wood pressed oil; Nuts and dry fruits; Fibrous diet fibre – Greens, Vegetables and fruits; vegetable and fruit salads, soups

Unit III: Healthy and nutritious Animal Based Food: Facts Advantages and Limitations Composition and nutritive values of Milk and milk products – curd, butter, ghee, cheese, paneer and ice cream. Egg and animal protein, red meat, poultry and fish. Omega protein and food values, Health issues related to HDL and LDL Fats

Unit IV: Food additives- spices - turmeric, tamarind pulp, black cumin, pepper, fenugreek, ginger, coriander, mint and condiments - asafoetida, cardamom, cinnamon, cloves, nutmeg, poppy seeds, Ill effects of using ajinomoto, reused oil, colouring agents - Health ailments - short term and long term effects

Unit V:: Food Sustainability - Food wastage, food spoilage, food poisoning and food adulteration - Causal factors, effects and detection methods; preventive measures; Food Security - Guidelines and Legislative Principles - Implementing Agencies - hygienic cooking of healthy and nutritious food - Sustainable Food Culture for Healthy Life

Text Books:

1. PatricaTrueman, 2007. Nutritional Biochemistry, MJP Publishers.
2. ShankuntalaManay, N. and M.Shadaksharaswamy, 2014. Foods-Facts and Principles. 3rd Edn. New Age, International (P) Limited Publishers.
3.Srilakshmi, B. 2018. Food science. New age international publishers.

References:

1. William C Frazier, Dennis C Westhoff, Adapted by N.M.Vanitha, 2014. McGraw Hill Education(India) Private Limited, New Delhi.
2.SunetraRoday. 2012. Food science and nutrition. Oxford Publishers.
3. Srilakshmi, B. 2010. Nutrition Science. New Age International Private Limited.

Web Resources:

https:// www.wholehealthsource.blogspot.com
https:// www.foodsciencesecrets.com

Course Designers:

1.Dr.D. Kannan and
2. Dr. B.Sadhana

Thiagarajar College (Autonomous):: Madurai – 625 009

(An Autonomous Institution Affiliated to Madurai Kamaraj University)
Re-Accredited with 'A^{++}' Grade by NAAC
Training and Placement Cell
(For those joined on or after June 2021)

Course Code	Course Title	Category	Hours
TPC21COP1	**Career Skills and Interview Handling**	CoP	40

Preamble

This course provides a student with basic insights on how to analyse a job, prepare for a recruitment process and get hired

Course Contents

UNIT I **4 Hours**

Introduction to Campus placements and Hiring Scenario**,** Journey from Campus to Corporate, Strategies for analyzing a job, How to useLinkedIN

UNIT II **4 Hours**

Introduction to Softskills, Importance of creating a habit, Smart Goal Setting,Writing a Self introduction for Interviews, Building a good resume with Tips and Techniques, Writing a project content for resume

UNIT III **4 Hours**

Problem solving skills, Talking about Challenging Moment, Role Model Exercise– Significance and impact on people, Dress Etiquettes, Body Language, Introduction to Interview handling, HR Interview questions - Discussion and presentation

UNIT IV **5 Hours**

Introduction to Group Discussion – Types of GD, Tips and Techniques, Mock GD sessions, Refreshing Grammar concepts, Essay writing, Email Writing, Just a Minute topics- How these help us in Interview process

UNIT V **3Hours**

Mock Interview process in class room , Selling yourself – An activity based learning

Text Books

1. Campus to Corporate – Gangadhar Joshi, SAGE Publication, 2017 Edition

Reference Books

1. What Color is your parachute – Richard N.Bolles, Ten Speed Press,2020 Edition
2. Bridging the softskill gap – Bruce Dugan, Wiley Publications, 2016 Edition
3. Wren and Martin Grammar and composition – NDV PrasadaRao, Blackie Books Publication, 2017 Edition

Course Designer:

1. Mr. R. Rajesh

Diploma Courses
DOP

THIAGARAJAR COLLEGE, MADURAI–9.
PG & Research Department of English
(For those who joined M.A. English in June 2021 and after)
Programme Code – PEN

Course Code	Course Title	Category	Hours
PEN21DOP1	Introduction to Human Rights	Diploma	60

Preamble

This course focuses on imparting the basic ideas about human rights especially pertaining to women and children. It sensitises the students on their rights and privileges. It also educates them to become legally knowledgeable and socially responsible.

Course Pre-requisites

Students are expected to have a prior knowledge about the Indian Constitution and the Fundamental Rights.

Course Outcomes

On the completion of the course the student will be able to

	Course Outcome	Expected Proficiency in %	Expected Attainment in %
CO1	explain the key historical, legal and moral influences that have shaped the idea of human rights.	70	65
CO2	demonstrate the concepts of Rights.	70	65
CO3	analyse the contemporary challenges and trends in human rights at Local, State and National Levels.	60	55
CO4	Identify the major national declarations, treaties and covenants that govern human rights.	60	55
CO5	create awareness about the basic human rights to the needy.	70	65

Unit I – Introduction to Human Rights

Historical Evolution of Human Rights – Concept of Human Rights: Definition, Classification and the Principles of Human Rights – Understanding Basic Terminology in Human Rights – French Revolution – Slavery System – American Civil War – Universal Franchise - American Civil Rights Movement - Universal Declaration of Human Rights 1948

Unit II – Human Rights and Duties in Indian Constitution

Indian Constitution and Its Structure – The Preamble – The Fundamental Rights (Right to Equality (Articles 14-17), Right to Freedom (Articles 19-22), Right against Exploitation (Articles 23 -24), Right to Freedom of Religion (Articles 25-28), Cultural and Educational Rights (Articles 29-30), Directive Principles of State Policy (Articles 36 to 51), Fundamental Duties (Article 51 (A)), Right to Constitutional Remedies (Article 32) – Comparison between the UDHR and Fundamental Rights – Directive Principles in the Constitution

Unit III – Group Rights and Violations

Understanding Rights and Identifying each of their Violations – Laws Upholding Rights of Vulnerable Sections of Society – Introduction to the Rights of Children, Women, Dalits and Adivasis, Persons with Disabilities and the Aged – Introduction to Environmental Rights

Unit IV – Human Rights Institutions at National, State and Local Levels

National Human Rights Institutions: History and International Principles – The NHRIs in India: NHRC, NCW, NCM, NCSC, NCST, NCPCR, CIC, NCPWDs, NCSK – State Human Rights Institutions in India and those with specific reference to Tamil Nadu such as SHRC, SCW, SCM, SCPCR and SIC – Functions, Powers and Complaints Handling under all N/SHRIs to Human Rights Violations – Introduction to District Level Institutions such as Child Welfare Committees, District Child Protection Units, Child Line Foundations, Nirbhaya Centres, District Legal Services Authority

Unit V – Human Rights for Our Protection

Our Rights Vs. Police and Search and Arrest – NGOs in Protecting Human Rights at Global, National, State and Regional Levels – About Human Rights' Defenders – Right to Information Act and Its Use for Higher Education Students – Drafting of Complaints to Authorities – Online and Offline

Text

The text will be compiled by the department.

Course Designers: Dr. C. S. Senthil and **Ms. S. Nivetha**

THIAGARAJAR COLLEGE, MADURAI – 9.
(An Autonomous Institution Affiliated to Madurai Kamaraj University)
Re-Accredited with 'A++' Grade by NAAC
POST GRADUATE AND RESEARCH DEPARTMENT OF MATHEMATICS
(For those who joined M.Sc. Mathematics on or after June 2021)

Course Code	Course Title	Category	Hours
PMA21DOP	**Mathematical Software**	DoP	60

Course Code	Course Title	Category
PMA21DOP1	**Essentials and Usages of Mathematica**	DoP

L-Lecture T-Tutorial P–Practical

Year	Semester	Int. Marks	Ext. Marks	Total
First	First	25	75	100

Preamble

Wolfram Mathematica is a technical computing solution that provides businesses of all sizes with tools for image processing, data visualization and theoretic experiments. This course provides an introduction to Mathematica and deals with symbolic computation, manipulating matrices, plotting functions and handling various types of data.

Prerequisite

Knowledge in Fundamental computer programming concepts and some mathematical principles

CourseOutcomes

On the completion of the course the student will be ableto

#	Course Outcome	Expected Proficiency (%)	Expected Attainment (%)
CO1	Recall fundamental Mathematica commands	80	70
CO2	Solving some problems in Linear algebra, Graph theory, Differential Equations, Number theory, Operations Research and Discrete Mathematics	85	75
CO3	Illustrate programs using Mathematica and some real life problems	80	70
CO4	Develop simple projects using Mathematica	85	70
CO5	Apply different techniques in Mathematica to solve various problems	80	75

Contents 30 Hours

Core Language

Language Overview – Expressions – Rules & Patterns – Procedural Programming – Parallel Programming – Package Development – Syntax – Units – Lists – Variables & Functions – Functional Programming – Sting Manipulation – External Operations – Tuning & debugging.

Mathematics and Algorithm

Mathematical functions – Formula manipulation – Matrices & Linear Algebra – calculus – Polynomial Algebra – Graphs & Networks – Logic & Boolean Algebra – Control Systems – Mathematical Data – Number & Precision – Equation Solving – Optimization – Probability &

Statistics – Discrete Math – Number Theory – Computational Systems – Finance.

Visualization and graphics

Data visualization – Charting – Statistical visualization – Gauges – Drawing & interactivity – computational Geometry – Sound &Sonification – Function visualization – Dynamic visualization – Financial visualization – Options & Styling – Symbolic Graphics language – Importing & Exporting

Data manipulation

Importing & Exporting – Numerical Data – Image Processing – Text Processing – Files – Date & time – Arrays.

References:

1. Martha L. Abell, James P. Braselton, 2009, Mathematica by Example, 4th Edition, Academic Press, USA.
2. Michael Trott, 2004, The Mathematica Guide Book for Programming, Springer, USA
3. Stephen Wolfram, 2003, The Mathematica Book, 5th Edition, Wolfram Media, USA
4. John Gray, 2014, Mastering Mathematica- Programming Methods and Applications, Academic Press,
5. Wolfram Mathematica 9 Documentation – Original.

CourseDesigners:

1. Dr. B. Arivazhagan
2. Mr. M. Madhavan

THIAGARAJAR COLLEGE, MADURAI – 9.
(An Autonomous Institution Affiliated to Madurai Kamaraj Uiversity)
Re-Accredited with 'A++' Grade by NAAC
POST GRADUATE AND RESEARCH DEPARTMENT OF MATHEMATICS
(For those who joined M.Sc. Mathematics on or after June 2021)

CourseCode	Course Title	Category
PMA21DOP2	**R- Environment for Applied Mathematics**	DoP

L-Lecture T-Tutorial P–Practical

Year	Semester	Int. Marks	Ext. Marks	Total
First	Second	25	75	100

Preamble

R is a programming language and free software environment for statistical computing and graphics supported by the R Foundation for statistical computing. This course deals with descriptive statistics such as mean, median, mode, standard deviation and standard error with visualization of data. Also it discusses the methods solving ordinary, partial and stochastic differential equations using different packages.

Prerequisite

Knowledge in Fundamental computer programming language and some mathematical and statistical concepts.

CourseOutcomes

On the completion of the course the student will be ableto

#	Course Outcome	Exp. Prof. (%)	Exp. Attmt. (%)
CO1	Recall the fundamental R commands	85	75
CO2	Solving some problems in Ordinary, Partial and Stochastic Differential Equations	85	75
CO3	Demonstrate statistical approach of some real life problems using R	80	70
CO4	Construct simple projects using R	85	70
CO5	Apply different techniques in R Software to solve various problems	85	70

Contents 30 Hours

Introduction to R Software and Data Handling

Software Overview – Basics and R as a Calculator – Calculations with Data vectors – Build-in Commands and Missing Data handling – Operations with Matrices – Variables and Types of Data – Absolute frequency – Relative Frequency – Frequency distribution function – Cumulative Distribution Functions.

Visualization and Plots

Bar Diagrams – Subdivided Bar Plots and Pie Diagrams – 3D Pie Diagram and Histogram – Kernel Density and Steam-Leaf Plots.

Descriptive Statistics

Arithmetic Mean – Median – Quartiles – Mode – Geometric Mean and Harmonic Mean – Range, Interquartile range and Quartile Deviation – Absolute Deviation and Absolute Mean Deviation – Mean Squared Error, Variance and Standard deviation.

Solving Differential Equations using deSolve Package

A simple ODE: chaos in the atmosphere – Model specification – Model applications - Solver forInitial Value Problems of Ordinary Differential equations in R – Runge-Kutta methods and Euler- Solving PDEs using deSolve – Examples.

Solving Stochastic Differential Equation using Sim.DiffProc Package

Solving 1-dimensional Stochastic Differential Equations – Systems of Diagonal Noise SDEs – System of SDEs with Non-diagonal Noise- Simulation of 2-D and 3-D Stochastic Differential Equations-Examples.

References:

1. Arsalane Chouaib Guidoum[cre, aut], Kamal Boukhetala[aut], 2020, Simulation of Diffusion Process Packages, R version(>=3.0.0)
2. Karline Soetaert, Thomas Petzoldt, Woodrow Setzer. R., 2010, Package deSolve: Solving Initial Value Differential Equations in R.
3. Michael J. Crawley, 2015, Statistics – An Introduction using R, Second Edition, John & Wiley Sons, Ltd, UK
4. Peter Dalgaard, 2008, Introductory Statistics with R, Second Edition, Springer.
5. R Documentation- Version (3.6.2 and above)
6. Stefano M. Lacus, 2008, Simulation and Interference for Stochastic Differential Equations with R Examples, Springer

CourseDesigners:

1. Dr. B. Arivazhagan
2. Mr. M. Madhavan