

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI
COURSE PLAN June - November 2024

Department : MATHEMATICS

Name/s of the Faculty : Dr. Arumika and Dr.Subbulakshmi

Course Title : LIFE SKILLS – HEALTH, ENERGY AND COMPUTER BASICS

Course Code : 19MT/SS/HC13

Shift : I

COURSE OUTCOMES (COs)

COs	Description	CL
CO1	recall the basic types of ordinary, partial differential equations and system of differential equations	K1
CO2	understand and illustrate the methods used for solving the problems	K2
CO3	apply differential equations to model and solve the real world problems	K3
CO4	classify and analyze various methods used in solving differential equations	K4
CO5	evaluate general solutions of ordinary and partial differential equations	K5

Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Jun 19 – 26, 2024 (Day Order 1 - 6)		Unit 1 Food and Health 1.1 Traditional food and their health benefits 1.1.1 Six tastes – Natural guide map towards proper nutrition					
Jun 27 – July 4, 2024 (Day Order 1 - 6)	1	Unit 1 Food and Health 1.1 Traditional food and their health benefits 1.1.2 Nutritional value and significance of Navadhanya (Sesame seed, Bengal gram, Horse gram, Green gram, Paddy seeds, White beans, Wheat, black gram and Chick pea) and Greens (Vallarai, Thuthuvalai, Manathakkali, Pulichakeerai, Agathi Keerai, Murungai Keerai, Karuveppilai, Puthina and Kothamalli)	K1-K5	5	CO1-5	Lecture and Group Discussion Learning by Doing Problems	Quiz
July 5 – 12, 2024 (Day Order 1 - 6)	1	Unit 1 Food and Health 1.2 Causes, symptoms and home remedies for the following ailments Common cold, Anaemia, Hypothyroidism, Obesity, Diabetes	K1-K5	5	CO1-5	Lecture and Group Discussion Learning by Doing Problems	Problem Solving
July 15 – 23, 2024	2	Unit 1 Food and Health 1.2 Causes, symptoms	K1-K5	5	CO1-5	Lecture and Group Discussion	Questioning

(Day Order 1 - 6)		and home remedies for the following ailments Mellitus, Polycystic Ovarian Syndrome, Ulcer, Wheezing and Hypertension				Learning by Doing Problems	
July 24 – 31, 2024 (Day Order 1 - 6)	2	Unit 2 Food and energy balance 2.1 Units of Energy, Components of Total Energy Requirement – Basal Metabolic Rate, energy requirements for (work) physical activity and Thermic effect of Food	K1-K5	5	CO1-5	Lecture and Group Discussion Learning by Doing Problems	III Component I- Problem Assignment Test (15 Marks)
Aug 1 – 5, 2024 (Day Order 1 - 3)	2	Unit 2 Food and energy balance 2.2 Factors affecting Basal Metabolic Rate and Thermic Effect of food	K1-K5	3	CO1-5	Lecture and Group Discussion Learning by Doing Problems	Quiz
Aug 6 – 10, 2024	C.A. Test – I (Unit 1(fully) and Unit 2 (2.1 – 2.3))						
Aug 12 – 14, 2024 (Day Order 4-6)	3	Unit 2 Food and energy balance 2.3 Recommended Dietary Allowances and Balanced Diet, Food Energy Values- Calculation	K1-K5	2	CO1-5	Lecture and Group Discussion Learning by Doing Problems	Problem solving
Aug 16 – 23, 2024	3	Unit 3 3.1 Energy conservation	K1-K5	5	CO1-5	Lecture, Group Discussion and Presentations	Assignments

(Day Order 1-6)		3.1.1 Needs for Energy Conservation – Power consumption of domestic appliances – Electrical Energy Audit – Strategies for Energy Conservation - Modern lighting systems– Light emitting diode (LED)				Learning by Doing Problems	
Aug 27 – Sep 3, 2024 (Day Order 1-6)	3	Partial Differential Equations of the First Order 3.4 Some Particular Method – $f(p, q) = 0, z = px + qy + f(p, q), f(z, p, q) = 0, f(x, p) = F(y, q)$	K1-K5	5	CO1-5	Lecture and Group Discussion Learning by Doing Problems	Questioning and Quiz
Sep 4 – 11, 2024 (Day Order 1-6)	3,4	Partial Differential Equations of the First Order 3.5 Linear Partial Differential Equation of Order One - Lagrange's Method Partial Differential Equations of Higher Order with Constant Coefficients 4.1 Homogeneous Linear Partial Differential Equations with Constant Coefficients 4.2 Solutions of Partial Differential Equations	K1-K5	5	CO1-5	Lecture and Group Discussion Learning by Doing Problems	Presentations

Sep 12 - 20, 2024 (Day Order 1-6)		Partial Differential Equations of Higher Order with Constant Coefficients (Contd.) 4.3 Complementary Function 4.4 Particular Integral of the form e^{ax+by} , x^r, y^s	K1-K5	5	CO1-5	Lecture and Group Discussion Learning by Doing Problems	III Component Problem Assignment Test (25 Marks)
Sep 23 - 26, 2024 (Day Order 1-4)		Partial Differential Equations of Higher Order with Constant Coefficients (Contd.) 4.4 Particular Integral of the form e^{ax+by} , x^r, y^s	K1-K5	4	CO1-5	Lecture and Group Discussion Learning by Doing Problems	Problem Solving
Sep 27 – Oct 3, 2024	C.A. Test – II (Units 3, 4)						
Oct 4 – 5, 2024 (Day 5 & 6)		Applications of Second Order Linear Differential equations 5.1 Spring Problems	K1-K5	1	CO1-5	Lecture, Group discussion and Presentations Learning by Doing Problems	Quiz
Oct 7 - 15, 2024 (Day Order 1 to 6)		Applications of Second Order Linear Differential (Contd.) 5.2 Electrical Circuit Problems	K1-K5	5	CO1-5	Lecture and Group Discussion Learning by Doing Problems	III Component Group Presentations- (10 Marks)
Oct 16 - 22, 2024 (Day Order 1 to 6)		5.3 Related Problem	K1-K5	5	CO1-5	Lecture and Group Discussion Learning by Doing Problems	Problem Solving
Oct 23 - 24, 2024 (Day Order 1 to 2)	REVISION						