R.M.D ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATON ENGINEERING

FACULTY COURSE ASSESSMENT REPORT

COURSE CODE	EC8791
COURSE NAME	Embedded and Real Time Systems
YEAR/SEMESTER	IV/VII
ACADEMIC YEAR (AY)	2021-2022 ODD Sem
NAME OF THE COURSE CO-ORDINATOR	Mr.P.ARUL

Course Overview:

This course emphasizes on comprehensive treatment of embedded hardware and real time operating systems along with case studies, in tune with the requirements of Industry. The objective of this course is to enable the students to understand embedded-system programming and apply that knowledge to design and develop embedded solutions.

Course Objectives:

The objectives are to study this Course

1. Understand the concepts of embedded system design process and analysis

2. Learn the architecture and programming of ARM processor

3. Be exposed to the basic concepts of embedded programming

4. Learn the real time operating systems

5. Demonstrate real time applications using embedded system design concepts

.Course Outcomes:

A student who successfully completed this course will be able,

1. Apply the knowledge of Embedded system design process to develop the products.
2. Design an Embedded system applications using ARM Processor.
3. Analyze the performance and optimization techniques of embedded programming components.
4. Apply the basic concepts of Real Time System for Embedded system design.
5. Analyze the performance and power optimization strategies of Real time operating systems.
6. Design Real time applications using Embedded system design concepts.

Course Outcome Statements:

At the end of this Course students will be able to,

Course Code	Course Outcome Statement	Cognitive/Affective Level of the Course Outcome	Previous Year Attainment	Target
C403.1	Apply the knowledge of Embedded system design process to develop the products.	Apply (K3)	75.5%	80%
C403.2	Design an Embedded system applications using ARM Processor.	Apply (K3)	78.2%	80%
C403.3	Analyze the performance and optimization techniques of embedded programming components.	Analyze (K4)	76.5%	80%
C403.4	Apply the basic concepts of Real Time System for Embedded system design.	Apply (K3)	73.4%	80%
C403.5	Analyze the performance and power optimization strategies of Real time operating systems.	Analyze (K4)	76.5%	80%
C403.6	Design Real time applications using Embedded system design concepts.	Apply (K3)	72.3%	80%

Mapping of CO, PO and PSO:

Course Outcomes (COs)	Programme Outcomes (POs), Programme Specific Outcomes (PSOs)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C204.1	3	2	2	2	2	2	-	-	-	-	3	3	1	3	2
C204.2	1	2	3	2	3	1	-	-	-	-	2	2	1	3	3
C204.3	2	1	2	1	2	-	-	-	-	-	3	2	1	2	1
C204.4	1	2	2	1	3	-	-	-	-	-	2	1	1	3	1
C204.5	2	1	1	-	1	-	-	-	-	-	2	1	-	2	-
C204.6	1	2	2	3	3	2	-	-	-	-	3	2	1	2	3
C204	**1.7**	**1.7**	**2**	**1.8**	**2.4**	**1.7**	**-**	**-**	**-**	**-**	**2.5**	**1.8**	**1**	**2.5**	**1.7**

Note: Strong Contribution-3 Medium Contribution-2 Weak Contribution -1

CO: Course Outcome PO: Program Outcome PSO: Program Specific Outcome

Computation of CO through Direct Assessment:

60% of Students Scoring>=60% Marks in each Question in Continuous Assessment

70% of Students Scoring>=B grade in University Examination

Course Outcomes (COs)	Continuous Assessment Marks (CA)	University Result (UR)	Direct CO Attainment (0.4*CA + 0.6*UR)
CO1	65.5		82.6%
CO2	68.4		87.3%
CO3	70.5		88.2%
CO4	66.2	100%	86.4%
CO5	68.5		87.4%
CO6	64.5		85.8%

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO11	PO12	PSO1	PSO2	PSO3
C403	1.7	1.7	2	1.8	2.4	1.7	2.5	1.8	1	2.5	1.7
Attainment	1.47	1.47	1.73	1.55	2.07	2.07	2.16	1.55	0.86	2.16	1.47

PO1: (1.7/3) * Avg (0.826+0.873+0.882+0.864+0.874+0.858)= 0.866*3=1.47

PO2:(1.7 /3) * Avg (0.826+0.873+0.882+0.864+0.874+0.858)= 0.866*3=1.47

PO3: (2/3)* Avg (0.826+0.873+0.882+0.864+0.874+0.858)=0.866 *3=1.73

PO4: (1.8/3)* Avg (0.826+0.873+0.882+0.874+0.858)=0.862*3=1.55

PO5: (2.4/3)* Avg (0.826+0.873+0.882+0.864+0.874+0.858)=0.866*3=2.07

PO6: (2.4/3)* Avg (0.826+0.873+0.882+0.864+0.874+0.858)=0.866*3=2.07

PO11: (2.5/3)* Avg (0.826+0.873+0.882+0.864+0.874+0.858)=0.866*3=2.16

PO12: (1.8/3)* Avg (0.826+0.873+0.882+0.864+0.874+0.858)=0.866*3=1.55

PSO1: (1/3)* Avg (0.826+0.873+0.882+0.864+0.858)= 0.860*3= 0.86

PSO2: (2.5/3)* Avg (0.826+0.873+0.882+0.864+0.874+0.858)=0.866*3=2.16

PSO3: (1.7/3)* Avg (0.826+0.873+0.882+0.864+0.858)= 0.860*3=1.47