Marwadi University
Faculty of Diploma studies
Information and Communication Technology

Diploma Year – III (Semester V)

Subject Name: Project I

Subject Code - 09CT0504

Objectives: The subject provides hands-on learning experience to the students with the opportunity to explore a problem or issue of personal or professional interest and to address that problem or issue through focused study and applied research under the direction of a faculty member. This course also provides platform to implement and learnt concepts in various subjects in case of project design and to provide in-depth exposure in the field of software, data analytics, embedded, VLSI, networking, and security.. It is also useful to enhance students' ability to think critically and creatively, to solve practical problems, to make reasoned and ethical decisions, and to communicate effectively.

Credits Earned: 02 Credits

Course Outcomes: After completion of this course, student will be able to:

1. Investigate the chosen topic in depth
2. Apply the concepts and theories learnt in previous subjects
3. Apply the various methodologies to design project for specific application
4. Explore the new ideas & the possible areas to work ahead
5. Sharpen the skills in specific direction

Pre-requisite of course: Basic knowledge of all academic subjects and readiness to explore new things

Teaching and Examination Scheme:

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial / Practical Marks		Total Marks
				E	I		V	T	
Theory	Tutorial	Practical		ESE	IA	CSE	Viva	Term Work	
0	0	4	02	00	00	00	50	50	100

Contents:

Unit	Topics	Contact Hours
1	**Project Identification** Gathering the information through website, media, Industry or research organization, visit of faculty, discussion , industry interaction, review of literature	05
2	**Problem Definition and Project Finalization** Define the project with proper report, reason, and justification, Prepare the problem definition and presentation in particular format.	10
3	**Diagram, Design and Algorithm** Prepare block diagram, circuit diagram, required software and hardware for the implementation of project, Development of algorithm and flowchart wherever required.	15
4	**Design, Simulate, Assemble and Test** Design layout using required tool, do simulation as per requirements, partial implement using breadboard, general purpose PCB, various hardware modules, software platform, test and troubleshoot if required.	15
5	**Project Report and Presentation** Prepare project report and presentation as per the given format from the department, presentation as per the rules and schedule from the department.	10
	Total Hours	55 Hrs

Suggested Theory distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process.

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyze	Evaluate	Create
20%	20%	30%	10%	10%	10%

Suggested Student Activity:

i. Prepare and submit project definition document in prescribed format.
ii. Visit industry if required
iii. Get help from innovative council/research organization for design solution.
iv. Report regarding stage wise progress to institute guide/industry mentor regularly.
v. Continuous practicing of latest circuit design and simulation tools/software.
vi. Study of intellectual property rights for patenting the project.

SPECIAL INSTRUCTIONAL STRATEGIES (if any)

i. One day IDP awareness workshop.
ii. Industry survey.
iii. Seminar/Symposium
iv. Group discussion/Debate
v. Expert lectures of resource persons from industries/research organizations.
vi. Arranging Industrial visit.

Supplementary Resources:

List of Magazines

I. Electronics for you,
II. Electronic design news,
III. Elector electronics,
IV. Electronics project manuals

List of Software/Learning Websites

I. http://www.electronicsproject.org
II. http://www.circuiteasy.com
III. http://www.electronics-project-design.com
IV. http://www.electronicsschematic.com