

COURSE TITLE	CAPSTONE PROJECT
COURSE CODE	01CT0715
COURSE CREDITS	3

Objective:

- 1 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 or industrial guide. This course also provides platform to implement 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 in case of industrial training. 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.
- 2 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 or industrial guide. This course also provides a platform to implement 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 in case of industrial training. 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.

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

- 1 Identify the existing problems
- 2 Apply the concepts and theories learnt in various courses
- 3 Apply the various methodologies to design project for specific application
- 4 Explore the new ideas and the possible areas to work ahead
- 5 Sharpen the skills by analyzing and evaluating the obtained outcomes

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

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	6	0	0	0	50	50
Contents : Unit	Topics						Contact Hours
Total Hours							

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	Module 1 The Project work should include appropriate elements of engineering standards, design, analysis, modeling, simulation, experimentation, prototyping, software development, research etc. as per the requirement of the project definition, Exploration of various domains of the discipline and finalization of domain for project or Industrial Training, Identification of proposed project definition by student or students' group in coordination with faculty guide or industrial mentor to address issue related to economic, environmental, social, political, ethical, health & safety, manufacturability, sustainability, management, science etc., Student's presentation on selected topic with outcomes of the project/Industrial Training and approval by project approval panel, Intermediate semester presentations include block diagram, flow chart, micro level block diagram, schematic, required hardware or software, features and application of project at regular interval	84
Total Hours		84

Textbook :

- 1 Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, John W. Creswell, J. David Creswell, Sage Publications, 2017
- 2 A Guide to the Project Management Body of Knowledge, Project Management Institute, Project Management Institute, 2017

References:

- 1 The Craft of Research, The Craft of Research, Wayne C. Booth, Gregory G. Colomb, Joseph M. Williams, University of Chicago Press, 2016
- 2 Project Management: A Systems Approach to Planning, Scheduling, and Controlling, Project Management: A Systems Approach to Planning, Scheduling, and Controlling, Harold Kerzner, Wiley, 2017

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					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
5.00	5.00	15.00	15.00	20.00	40.00

Instructional Method:

- 1 The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory and class-room.

Instructional Method:

- 2 Practical examination will be conducted at the end of the semester for evaluation of performance of students in laboratory.

Supplementary Resources:

- 1 https://onlinecourses.swayam2.ac.in/ntr20_ed16/preview