2	Cycle Test II	V	1 h	20
3	Seminar	Programmed in the entire semester	-	10
CPA	Compensation Assessment	VII	1 h	20
4	Final Assessment	End of the semester	3 h	50

COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)

The exit survey will be assessed based on the questionnaire prepared by the class teacher and expected attainment is 75% on 1-10 scale basis

COURSE POLICY (preferred mode of correspondence with students, policy on attendance, compensation assessment, academic honesty and plagiarism etc.)

MODE OF CORRESPONDENCE (email/ phone etc)

Faculty Chamber, mobile and email, if need arises. Otherwise, through class rep.

Individual students are welcome to have the subject related discussions at mutually convenient time, with the faculty. Scheduling of classes and assessments are only through class representative.

Faculty is to be contacted over phone only if it is urgent and important.

ATTENDANCE

The students are expected to attend all the classes.

COMPENSATION ASSESSMENT

Compensation assessment will be conducted only for the students those are absent on genuine grounds with prior intimation to the faculty.

ACADEMIC HONESTY & PLAGIARISM

No mobile phone is permitted inside the exam call.

FOR APPROVAL

Course Faculty 23.1.18 **CC-Chairperson** 23.1.18 **HOD** 23.1.18

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

COURSE PLAN – PART I			
Course Title	**WELDING APPLICATION TECHNOLOGY**		
Course Code	**MT626**	**No. of Credits**	**3**
Course Code of Pre-requisite subject(s)			
Session	**Jan. 2018**	**Section (if, applicable)**	**NA**
Name of Faculty	**Dr V Muthupandi**	**Department**	**MME**
Email	**vmuthu@nitt.edu**	**Telephone No.**	**9894050794**
Name of Course Coordinator(s) (if, applicable)			
E-mail		**Telephone No.**	
Course Type	**Elective course**		

Syllabus (approved in BoS)

Heat exchangers, power cycle piping, super heaters, reheaters, economiser, auxiliary pipes, materials, processes and testing/inspection.

Materials, processes, fabrication techniques and field welding for pressure vessel applications.

Materials, processes, fabrication and construction, use of automatic welding and systems in automobile industry, automation.

Oil and gas industry, materials, processes, fabrication, inspection and testing, case studies, recent trends and developments.

Materials, processes, fabrication, inspection and testing, reasons for stringent quality control measures in nuclear industry.

COURSE OBJECTIVES

- To learn the Heat exchangers, power cycles, heating equipments, materials and process used in making and testing of weld joints.
- To understand the materials, processes, fabrication techniques used in welding of pressure vessels and in automatic welding systems used in automobile industry.
- To gain knowledge of the materials, processes, fabrication, inspection and stringent quality control procedures used in oil, gas and nuclear industries.

COURSE OUTCOMES (CO)	
Course Outcomes	**Aligned Programme Outcomes (PO)**
1. Explain the heat exchangers, power cycles, heating equipments, materials and processes used in assembling, welding and testing of weld joints.	1,3,4,6,7,10,11,12
2. Select the appropriate materials, processes and fabrication techniques for welding of pressure vessels, automobile components, equipment's used in oil and gas industries, and nuclear power plants.	1,3,4,6,7,10,11,12
3. Carry out inspection and testing based on case studies, recent trends and developments and adopt stringent quality control measures in nuclear plants.	1,3,4,6,7,10,11,12

COURSE PLAN – PART II

COURSE TEACHING AND LEARNING ACTIVITIES

S.No.	Week/Contact Hours	Topic	Mode of Delivery
1	I-III	Heat exchangers, power cycle piping, super heaters, reheaters, economiser, auxiliary pipes, materials, processes and testing/inspection.	Chalk & Talk, ppt (By faculty, guest lectures and students' seminars)
2	IV-V	Materials, processes, fabrication techniques and field welding for pressure vessel applications.	Chalk & Talk, ppt (By faculty, guest lectures and students' seminars)
3	VI-VII	Materials, processes, fabrication and construction, use of automatic welding and systems in automobile industry, automation.	Chalk & Talk, ppt (By faculty, guest lectures and students' seminars)
4	VIII-IX	Oil and gas industry, materials, processes, fabrication, inspection and testing, case studies, recent trends and developments.	Chalk & Talk, ppt (By faculty, guest lectures and students' seminars)
5	X-XII	Materials, processes, fabrication, inspection and testing, reasons for stringent quality control measures in nuclear industry.	Chalk & Talk, ppt (By faculty, guest lectures and students' seminars)

COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Cycle Test I	III	1 h	20