Year & Sem:	Course Code: ME4604	Course Name: **Inspection and Quality Control**	No. of Credits: 4	L	T&PS	P
				2	2	0

UNIT-I: Inspection; Definition – Fundamentals – Sampling Vs. 100% inspection – Automated Inspection – when and where to inspection.

UNIT-II: Inspection Technologies; Inspection metrology – Contact Vs. Non contact Inspection – Conventional measuring and gaging techniques – co ordinate measuring machines – Surface measurement – Machine vision – other Optical Inspections.

UNIT-III: Quality; Definition, Introduction to TQM – History – Philosophies - juran, deming, Crosby, feigenbaum, ishikawa – Objectives. **Quality standards;** Need – Institutions - ISO 9000 series - ISO 14000 series – ISO certification process – third party audit.

UNIT-IV: Quality Control; Quality measurement system (QMS) – 7 QC tools - Quality Circles – Statistical process control – various process charts – Ishikawa diagram.

UNIT-V: Quality Function Development; elements – Benchmarking – advantages and limitations – Taguchi Analysis – Taguchi design of experiments.

UNIT-VI: Six Sigma; Introduction – Approach – Application of Six sigma to various industrial situations – DMAIC.

Reference Books:

1. Automation, Production system and Computer Integrated Manufacturing; M.P.Groover, PHI.
2. Production and Operations Management, S N Chary.
3. Total Quality Management, Bester field, Pearson.

Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations.

Video Lectures (Web Links):

1.
2.

Study Materials (Web Links):

1.
2.

Problems & Solutions (Web Links):

1.
2.

Assignments (Web Links):

1.2.