



Pimpri Chinchwad Education Trust's  
**Pimpri Chinchwad College of Engineering**  
Sector No. 26, Pradhikaran,  
Nigdi, Pune – 411 044



### COURSE OUTLINE

Department: Mechanical Engineering      A.Y.:2023-24 Sem-II      Date: 01/01/2024  
Class: Final Year B.Tech.      Course: Lean Six Sigma BME7606A (BME7606A/B)

#### Relevance of the course:

The course is introduced for the Computer/Civil/ENTC/IT final year B.Tech. students. as an 'Open Elective VI' in the autonomous curriculum. The contents are designed to the requirements at the industry. The Lean Six Sigma course covers topics like Introduction to Lean and Six Sigma, Tools used for defining and Measurement of Quality, Tools used for Analysis, Improvement, and Control of quality, Advanced Quantitative Techniques for Six Sigma, Six Sigma Implementation and Challenges, Continuous Improvement Methods. After learning this course students can enroll for certification of lean six sigma with yellow or green belt which will benefit to good employment opportunities.

#### Course Outcomes

CO No	CO Statement	No. of Theory sessions	Bloom's Level	Assessment tools
1.	<b>Understand</b> the principles and benefits of Lean Six Sigma.	7	L2	IE 1 (5m), MTE (15m), ETE (5m)
2.	<b>Apply</b> statistical tools for defining the quality attributes and measuring the performance of attributes.	8	L3	IE 1 (5m), MTE (15m), ETE (5m)
3.	<b>Apply</b> various tools to identify sources of variation affecting the quality of the process.	8	L3	MTE (20m), ETE (5m)
4.	<b>Apply</b> advanced quantitative techniques to improve processes in manufacturing industries.	7	L3	IE 2 (5m), ETE (20m)
5.	<b>Understand</b> the Six Sigma Implementation and Challenges in the manufacturing industry.	7	L2	IE 2 (5m), ETE (20m)
6.	<b>Apply</b> continuous improvement methods to improve the efficiency and effectiveness of the process.	8	L3	ETE (25m)



**Dr. Mahadev Madgule**  
Course Faculty and Coordinator