SOFTWARE METRICS

Course Code: 13IT2102 **L P C**
4 0 3

Pre requisites: Software Engineering.

Course Outcomes:

At the end of the course, a student will be able to

CO 1: Identify various software metrics.
CO 2: Classify software measures and methods.
CO 3: Measure the quality of software.
CO 4: Apply the measurement techniques in a project.
CO 5: Measure and Analyze Customer Satisfaction.

UNIT-I

Measurement: Measurement in Everyday Life, Measurement in Software Engineering, Scope of Software Metrics.

Frame Basics of Measurement: Representational Theory of Measurement, Measurement and Models, Measurement Scales and Scale Types.

UNIT-II

Work For Software Measurement: Classifying Software Measures, Applying Frame Work, Software Measurement Validation.

Software Methods in Data Collection: Good Data, Definition of Data, Collecting, Storing and Extracting Data.

UNIT-III

Measuring Internal Product Attributes: Measuring Size and Structure.

Measuring External Product Attributes: Modeling Software Quality, Measuring Aspects of Quality.

UNIT-IV Measurement and Management: Planning a Measurement Program, Measurement in Practice.

UNIT-V Customer Satisfaction: Empirical Research in Software Engineering, Measuring and Analyzing Customer Satisfaction: Customer Satisfaction Surveys, Analyzing Satisfaction Data, Satisfaction with Company.

Text Books:

1. Fenton, Pfleeger, *Software Metrics, A Rigorous and Practical Approach*, 2nd Edition, Thomson, 1998.
2. Stephen H. Kan, *Metrics & Models in Software Quality Engineering*, 2nd Edition, Addision-weseley Pearson Education, 2002.

References:

1. Sheppard, *Software Engineering Metrics*, 1st Edition, Mc GrawHill Publications, 1994.
2. Pertis et al, *Software Metrics, An Analysis and Evaluation,* 1st Edition, MIT Press, 1981.

Web references:

www.softwaremetrics.com/fpclass.html