SOFTWARE METRICS

Course Code: 15IT2102

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Pre requisites: Software Engineering.

Course Outcomes:
At the end of the course, a student will be able to
CO1: Identify various software metrics.
CO2: Classify software measures and methods.
CO3: Measure the quality of software.
CO4: Apply the measurement techniques in a project.
CO5: Measure and Analyze Customer Satisfaction.

UNIT-I (10-Lectures)
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 (10-Lectures)
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 (10-Lectures)
Measuring Internal Product Attributes: Measuring Size and Structure.
Measuring External Product Attributes: Modeling Software Quality, Measuring Aspects of Quality.

UNIT-IV (10-Lectures)

Measurement and Management: Planning a Measurement Program, Measurement in Practice.

UNIT-V (10-Lectures)

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