

# System Analysis and Design

## Lecture 1

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City University

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# Table of Contents

- 1 About Me
- 2 CSE – 325 System Analysis and Design Theory
- 3 CSE – 326 System Analysis and Design Laboratory
- 4 Jobs in Industries
- 5 Systems Analysis and Design
- 6 References



# Table of Contents

- 1 About Me
- 2 CSE – 325 System Analysis and Design Theory
- 3 CSE – 326 System Analysis and Design Laboratory
- 4 Jobs in Industries
- 5 Systems Analysis and Design
- 6 References



# Instructor Notes

## About Me

Instructor: Supta Richard Philip

Designation: Senior Lecturer

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Home: <https://suptaphilip.github.io/>



# Table of Contents

- 1 About Me
- 2 CSE – 325 System Analysis and Design Theory
- 3 CSE – 326 System Analysis and Design Laboratory
- 4 Jobs in Industries
- 5 Systems Analysis and Design
- 6 References



# Course Notes and Books

## Reference Book

- Essential Books (Text Books): System Analysis Design UML Version 2.0 An Object-Oriented Approach, Alan Dennis, Barbara Haley Wixom and David Tegarden, Third Edition
- Recommended Reference Books: Whitten Bentley: System Analysis Design Method.

# Assessment Policies

- Mid Term Exam - 30%
- Final Term Exam - 40%
- Quizzes- 10% (Best 1 out of 2)
- Assignments - 10% (Best 1 out of 2)
- Attendance and others- 10%



# Course overview

- Introduction to Systems Analysis and Design
- Project management and Requirements
- Analysis
- Design
- Implementation





# Table of Contents

- 1 About Me
- 2 CSE – 325 System Analysis and Design Theory
- 3 CSE – 326 System Analysis and Design Laboratory
- 4 Jobs in Industries
- 5 Systems Analysis and Design
- 6 References



# Assessment Policies

- Mid Term Exam - 20%(solve one problems)
- Final Term Exam - 30%(solve one problems)
- Project and Presentation- 30%
- Assignments - 10% (Best 1 out of 2)
- Attendance and others- 10%



# Project and Presentation

- Everyone should have one github account.
- Make a group of three members.
- Proposal and Presentation(Before mid term).
- Report, presentation and demo(Before Final Term).



# Table of Contents

- 1 About Me
- 2 CSE – 325 System Analysis and Design Theory
- 3 CSE – 326 System Analysis and Design Laboratory
- 4 Jobs in Industries**
- 5 Systems Analysis and Design
- 6 References



# Role: Systems Analyst

- OOP and Design Pattern.
- Agile development methodologies.
- Work with Java 8, Scala, J2EE.
- Work in Devops (Git, Docker etc).
- Software Development Process and Architecture, Software Requirements, Software Architecture



# Role: Data Scientist

- OOP and Design Pattern.
- AI, Machine learning.
- Agile development methodologies.
- Work with Python, Java 8, Scala.
- Work with big data, Hadoop and Spark.
- Work in Devops (Git, Jenkins, Docker, ansible etc).



# Role: Java Application Developer

- OOP and Design Pattern.
- Core Java 8, Core Spring, REST, test frameworks (JUnit, Mockito, Wiremock etc), Maven, databases (Oracle, Postgres), version handling (GIT), Amazon Web Services.



# Table of Contents

- 1 About Me
- 2 CSE – 325 System Analysis and Design Theory
- 3 CSE – 326 System Analysis and Design Laboratory
- 4 Jobs in Industries
- 5 Systems Analysis and Design**
- 6 References





# Introduction to Systems Analysis and Design

- Systems development life cycle (SDLC)
- Planning
- Analysis
- Design
- Implementation




# Table of Contents

- 1 About Me
- 2 CSE – 325 System Analysis and Design Theory
- 3 CSE – 326 System Analysis and Design Laboratory
- 4 Jobs in Industries
- 5 Systems Analysis and Design
- 6 References



# References

-  Systems Analysis and Design with UML  
Version 2.0: An Object-Oriented Approach.  
by Alan Dennis (Author), Barbara Haley  
Wixom (Author), David Tegarden (Author).  
Third Edition