# 01.Class Introduction
# CPSC 131

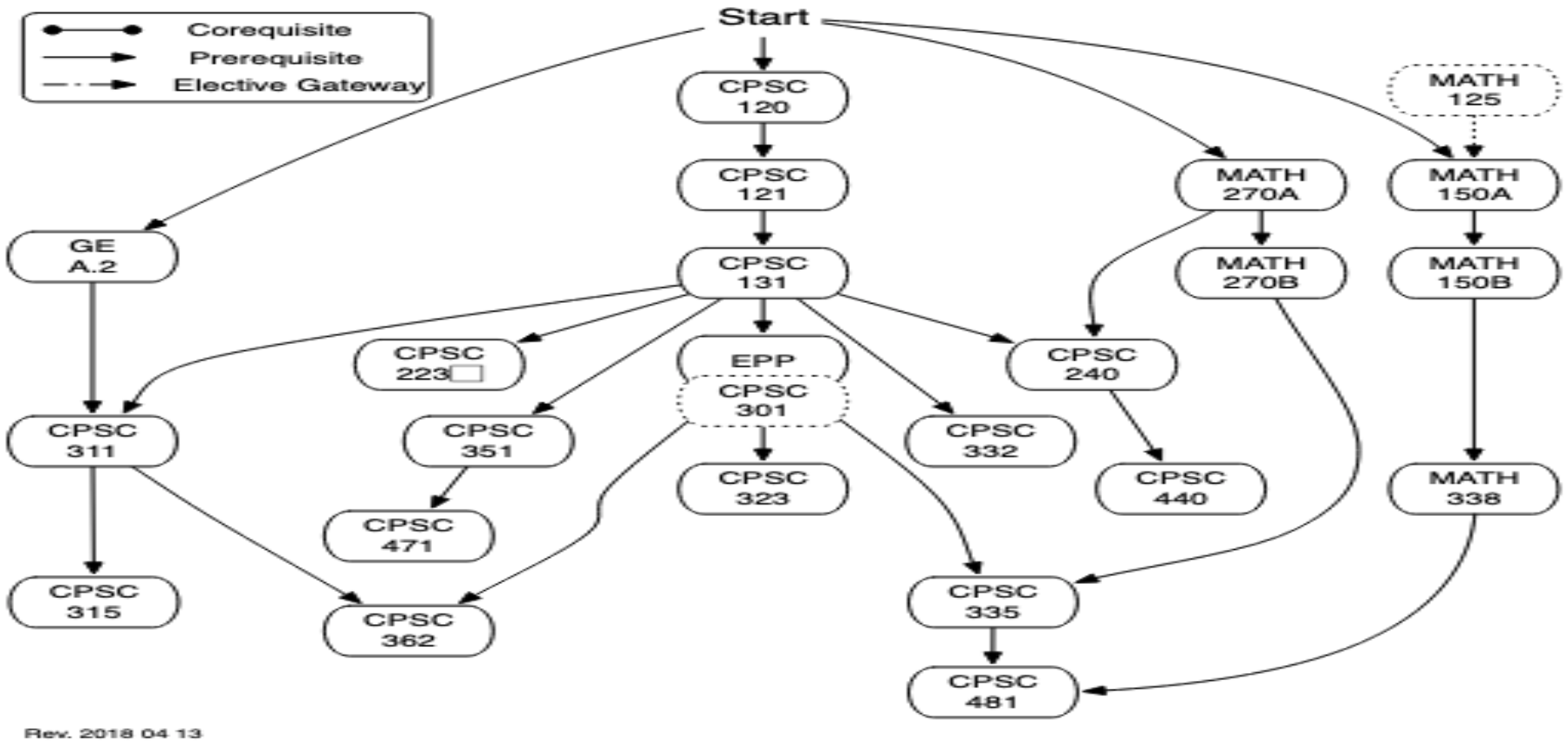
PRANAY NETHA, GUDA

Portions of this Slides is Drawn from Professor Wortman,Kevin

# Data Structures???

- A way to organize and store data for efficient use in a computer.
- It defines the relationship and operations that can be performed on the data.
- Eg:Arrays,Vectors,LinkedList.....etc

# Prerequisites and Foundations



# Is this a Programming Course??

- CS uses programming
- First: learn programming
- Then: problem-solving concepts
- Ex: algorithms, loops, recursion, top-down design
- 120-121: programming.
- 131: transition from “programming” to “concepts”

# Course Outline(Refer To Syllabus Copy)

- 4(In Class Activities-10%)
- Attendence-5%
- Quizes –15%
- Reading Assignments-5%
- 4(Programming Assignments)-20%
- Mid Term-20%
- Final Exam-25%

# Textbooks & References

## Required:

- Data Structures [Wikibooks]
- Open Data Structures (C++ edition), Pat Morin, et al. [opendatastructures.org]

## Recommended:

- The C++ Standard Library 2e, 2012, Nicolai Josuttis [Pearson Education] ISBN: 0-321-62321-5
- C++ Plus Data Structures, 6e, 2016, Dale, Weems, Richards [Jones & Bartlett Learning] ISBN: 978-1284089189

## Optional:

- CPPRefference.com
- LearnCpp.com

# Topics

- Arrays and Vectors
  - Singly and Doubly Linked Lists
  - Iterator Concepts
  - Stacks & Queues
  - Binary Trees
  - Balanced Binary Trees
  - Hash Tables
  - Graphs

# Agenda Next Week

- C++ Review(Arrays, Pointers, Dynamic Memory, References)