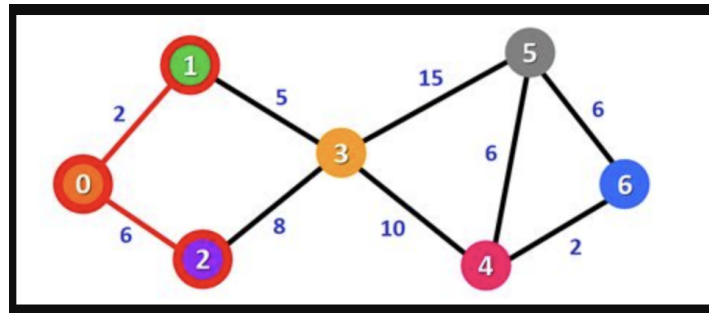


# VCU Math Spring 2025 MATH 356

## Graphs & Algorithms

Prof Craig Larson

TTH, 9:30 - 10:45 a.m.



In mathematics and computer science, **graph theory** is the study of graphs, which are mathematical structures used to model pairwise relations between objects.

In mathematics and computer science, an **algorithm** is a finite sequence of mathematically rigorous instructions, typically used to solve a class of specific problems or to perform a computation. Algorithms are used as specifications for performing calculations and data processing.

The **analysis of algorithms** is the process of finding the computational complexity of algorithms—the amount of time, storage, or other resources needed to execute them. Usually, this involves determining a function that relates the size of an algorithm’s input to the number of steps it takes (its time complexity) or the number of storage locations it uses (its space complexity). An algorithm is said to be efficient when this function’s values are small, or grow slowly compared to a growth in the size of the input. Different inputs of the same size may cause the algorithm to have different behavior, so best, worst and average case descriptions might all be of practical interest.

The Prerequisite is Math 201. For questions or more information, email Craig Larson @ [clarson@vcu.edu](mailto:clarson@vcu.edu)

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