

ELEC270 Discrete Mathematics with Computer Engineering App.

CLO 4: Apply the Pigeonhole Principle in mathematical proofs.

1 Tutorial Introduction - 10 Minutes

1. Opening question: “Which question style are you least comfortable with? (Proofs, Graphs, Counting)”

Briefly overview techniques for the question style that most students are uncomfortable with.

2 Breakout Rooms - 25 Minutes

Students sent to their tutorial group breakout rooms to solve the question:

Consider a simple graph $G = (V, E)$, where $|V| = n > 1$. Use the pigeonhole principle to show that there must be at least two vertices that share the same degree.

3 Tutorial Wrap-up - 15 Minutes

1. Present the solution to the tutorial question, with emphasis on areas of concern identified during the introduction.
2. Exit Question: “Which exam topics do you feel comfortable with?”