

AE 6101 ELASTIC STABILITY II

Catalog Data: AE 6101: Structural Stability II , 3-0-3. Prerequisite: AE6100

Buckling of beams on elastic foundations, rings and arches; elastica theory; torsional buckling of shafts, buckling of plates, circular cylindrical shells, rotating beams; nonconservative problems

LIST OF TOPICS

- Buckling of Beams on Elastic Foundations (1 week)
- Buckling of Rings and Arches (1 week)
- Elastica Theory: Static and Dynamic (1 week)
- Conservative Moments (1 week)
- Lateral-Torsional Buckling of Deep Beams Revisited (1 week)
- Torsional Buckling of Shafts (1 week)
- Buckling of Plates (1 week)
- Buckling of Circular Cylindrical Shells (1 week)
- Rotating Rods, Beams, and Plates (1 week)
- Nonconservative Problems (3 weeks)
- Kelvin-Tait-Chataev theorem (1 week)
- Instructor's Discretion (1 week)
- Quizzes (1 week)