Aerospace Engineering

Course Title: Experimental Modal Analysis **Number of Credits: 3**

Course Topics:

- Fundamentals of signal measurement
- Measurement system analysis
- Signal types and fundamental considerations in their measurement
- Signal processing
- Experimental modal analysis techniques
- Application of different EMA techniques
- Case studies

Reading Resources:

- D. J. Ewins, "Modal Testing: Theory, Practice and Application", John Wiley & Sons, 2009.
- "Structural Testing Part 1: Mechanical Mobility Measurements", Brüel & Kjær Primer, 1988.
- "Structural Testing Part 2: Modal Analysis and Simulation", Brüel & Kjær Primer, 1988.
- "Dual Channel FFT Analysis (Part 1)", Brüel & Kjær Technical Review # 1 – 1984.
- "Dual Channel FFT Analysis (Part 1)", Brüel & Kjær Technical Review # 2 – 1984.