

## Aerospace Engineering Sciences Textbooks for Spring 2015 Courses

### **GEEN 1400 - FR Engineering Projects –Jackson**

No Textbook

### **ASEN 1022 – Aerospace Materials – Hussein**

"Introduction to Materials Science for Engineers", Shackelford, 8<sup>th</sup> edition, Pearson/Prentice Hall, 2009; ISBN: 9780133826654

### **ASEN 1400 – Gateway to Space – Koehler**

No Textbook

### **ASEN 2003 - Aero 3: Dynamics & Systems – Larson/Nerem**

"Engineering Mechanics: Dynamics w/ Study Pack and Mastering Engineering Access" Bedford, 5<sup>th</sup> edition, Pearson; ISBN: 9780132971133

### **ASEN 2004 - Aero 4: Vehicle Design & Performance – Starkey/Parker**

(1) "Understanding Space: An Introduction to Astronautics", Larson, 3rd ed., McGraw Hill, 2007; ISBN: 9780077230302

(2) "Introduction to Flight", Anderson, 7th ed., McGraw Hill 2011; ISBN: 9780073380247

### **ASEN 3036 - Special Topics: Intro to Human Spaceflight – Voss**

"Spacefaring, the Human Dimension" by Albert Harrison, Univ of California Press, 2002; ISBN 9780520236776

### **ASEN 3046 – Intro to Human Spaceflight – Scott**

(1) "Flight: Complete History" Grant, Dorling Kindersley Publishing, Inc., 2007; ISBN 9780756619022

(2) "Handbook of Human Aviation" Kantowitz, 2nd ed., CRC Press, 2009; ISBN 9780805859065

### **ASEN 3128 – Aircraft Dynamics – Frew**

"Dynamics of Flight: Stability and Control", Bernard Etkin, Wiley & Sons, 3rd Ed., 1995, ISBN: 978-0-471-03418-6

Optional: "Small Unmanned Aircraft: Theory and Practice." R. Beard and T. McLain; Princeton University Press; ISBN: 978-0691149219

### **ASEN 3200 - Orbital Mechanics/Att Dyn & Control – Scheeres/Schaub**

"Orbital Mechanics for Engineering Students" Curtis, 3rd ed., Elsevier Science & Technology Books, 2013 ISBN 9780080977478

### **ASEN 3300 - Electronics & Communications – Sternovsky/Chu**

"Practical Electronics for Inventors" by Scherz and Monk; Third Edition ISBN: 9780071771337

### **ASEN 4012 – Materials – Jackson**

(1) "Materials: Engineering, Science, Processing and Design" 3rd edition by Ashby, Shercliff and Cebon, 2013 ISBN 9780080994345

(2) "Materials Selection in Mechanical Design" Ashby, 4th ed., Elsevier Science & Technology Books, 2010 ISBN 9781856176637

### **ASEN 4028 - Senior Projects 2: Design Practicum – Lawrence**

No Textbook

### **ASEN 4519-001 – Aerospace Software – Evans**

No Textbook

### **ASEN 5010 - Spacecraft Att Dyn/Controls – Schaub**

"Analytical Mechanics of Space Systems", Schaub and Junkins, 3rd ed., AIAA, 2014; ISBN: 9781624102400

**ASEN 5016 – Space Life Sciences – Klaus**

"Space Physiology", Buckley, Oxford University Press, 2006; ISBN 9780195137255

**ASEN 5018/6028 – Graduate Projects – Tanner**

"Just Enough Project Management", 2004, McGraw Hill, ISBN: 978-0-07-144540-5

**ASEN 5022 – Dynamic Aero Structures – Doostan**

"Mechanical Vibrations: Theory and Application to Structural Dynamics"; Geradin and Rixen; 3<sup>rd</sup> edition; ISBN: 978118900185

**ASEN 5053 – Rocket Propulsion – Kantha**

"Rocket Propulsion Elements", Biblarz, 8th ed., Wiley & Sons, 2009; ISBN: 9780470080245

**ASEN 5148 - Spacecraft Design – McGrath**

Check with Instructor

**ASEN 5168 – Remote Sens Instr Design – Emery**

No Textbook

**ASEN 5210 – Remote Sensing Seminar – Emery**

No Textbook

**ASEN 5235 – Randall**

"A First Course in Atmospheric Radiation"; ISBN: 9780972903318

**ASEN 5245 – Radar and Remote Sensing – Thayer**

"Principles of Modern Radar: Basic Principles", edited by Richards, Scheer and Holm, SciTech Publishing, 2010 (second printing). ISBN 978-1891121-52-4 (see [www.scitechpub.com](http://www.scitechpub.com))

**ASEN 5307 – Engineering Data Analysis Methods – Emery**

- (1) "Data Analysis Methods in Physical Oceanography" by Emery and Thomson, 3<sup>rd</sup> Edition, Elsevier; ISBN: 9780123877826
- (2) Optional: "MATLAB Recipes for Earth Science", Trauth, 3rd ed., Springer, 2010; ISBN 9783642127618

**ASEN 5335 – Aerospace Environment – Li**

"Understanding Space Weather and the Physics Behind It" Knipp, 2011 1st ed, McGraw Hill, ISBN: 978-0-07-340890-3

**ASEN 5519-001 – Compressible Flows – MCEN**

Check with MCEN Instructor

**ASEN 5519-002 – Commercial Spaceflight Operations Lab – Born/Cheetham**

No Textbook

**ASEN 6008-001 – Interplanetary Mission Design – Davis**

No Textbook

**ASEN 6037 – Turbulent Flows – MCEN**

No Textbook

**ASEN 6061 – Molecular Gas Dynamics – Argrow**

"The DSMC Method"; ISBN: 9781492112907

**ASEN 6090 – Advanced GNSS Software - Larson**

1. [Misra and Enge: "Global Positioning System, Signals Measurements, and Performance"; 2nd Edition: Ganga-Jamuna Press; ISBN 978-0970954428](#)

**ASEN 6116 – Spacecraft Life Support Systems – Nability**

"Spaceflight Life Support and Biospherics"; ISBN: 9781881883043

**ASEN 6327 – CFD Structured Grid – Biringen**

Check with Instructor

**ASEN 6519-002 – Atmospheric Tides and Planetary Waves – Forbes**

No Textbook

**ASEN 6519-005 – Space Vehicle Guidance and Control – McMahon**

No Textbook

**ASEN 6519-006 – Advanced Turbulence Simulation – Jansen**

"Turbulence Modeling for CFD" ISBN: 9781928729082

**ASEN 6519-007 – Model-based Parameter and State Estimation – Ahmed**

"Estimation with Applications to Tracking"; ISBN: 9780471416555