

## AOE 4065-4066 (Air Vehicle Design)

### List of Primary References

Ref. No.	Author(s)	Title	Hyperlink (access may be restricted to VT network)
<b>GENERAL ENGINEERING DESIGN (GED)</b>			
GED 1	Post, M.L., Brandt, S.A., and Barlow, D.N.	<b>Introduction to Engineering: A Project-Based Experience in Engineering Methods</b> AIAA Education Series, AIAA, Reston, VA, 2017.	
GED 2	Brandt, S.A., Stiles, R.J., Bertin, J.J., and Whitford, R.	<b>Introduction to Aeronautics: A Design Perspective</b> AIAA Education Series, AIAA, Washington DC, 2004.	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/kn/resources/kpIAADPE01/toc?kpromoter=marc">https://app-knovel-com.ezproxy.lib.vt.edu/kn/resources/kpIAADPE01/toc?kpromoter=marc</a>
GED 3	Dieter, G.E.	<b>Engineering Design: A Materials and Processing Approach</b> 3 <sup>rd</sup> Edition, McGraw-Hill Higher Education, New York, NY, 1999.	
GED 4	Ullman, D.G.	<b>The Mechanical Design Process</b> McGraw-Hill Higher Education, New York, NY, 1991.	
GED 5	Ertas, A., and Jones, J.C.	<b>The Engineering Design Process</b> John Wiley & Sons, Inc., New York, NY, 1993.	
GED 6	Norman, D.	<b>The Design of Everyday Things</b> Basic Books, New Your, NY, 1988.	
GED 7	National Research Council	<b>Theoretical Foundations for Decision Making in Engineering Design</b> The National Academies Press, Washington, DC, 2001.	<a href="https://doi.org/10.17226/10566">https://doi.org/10.17226/10566</a>
GED 8	Woodson, T.T.	<b>Introduction to Engineering Design</b> McGraw-Hill Book Company, 1966.	
<b>SYSTEMS THINKING &amp; SYSTEMS ENGINEERING (SE)</b>			
SE 1	Burge, S.E.	<b>Systems Engineering: Using Systems Thinking to Design Better Aerospace Systems</b> In Encyclopedia of Aerospace Engineering (eds R. Blockley and W. Shyy), 2010.	<a href="https://doi.org/10.1002/9780470686652.eae536">https://doi.org/10.1002/9780470686652.eae536</a>
SE 2	Kossiakoff, A. and Sweet, W.N.	<b>Systems Engineering Principles and Practice</b> John Wiley and Sons, Ltd., 2003.	<a href="https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/0471723630">https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/0471723630</a>
SE 3	Haberfellner, R., de Weck, O., Frickle, E., and Vossner, S.	<b>Systems Engineering: Fundamentals and Applications</b> Birkhauser, 2019.	<a href="https://link.springer.com/book/10.1007/978-3-030-13431-0">https://link.springer.com/book/10.1007/978-3-030-13431-0</a>
SE 4	NASA	<b>NASA Systems Engineering Handbook</b> , NASA SP-2007-6105 Rev 1, December 2007.	<a href="https://www.nasa.gov/connect/ebooks/nasa-systems-engineering-handbook">https://www.nasa.gov/connect/ebooks/nasa-systems-engineering-handbook</a>
SE 5	DoD	<b>Systems Engineering Fundamentals</b> , Defense Acquisition University Press, Fort Belvoir, VA, 2001.	<a href="https://ocw.mit.edu/courses/aeronautics-and-astronautics/16-885j-aircraft-systems-engineering-fall-2005/readings/sefguide_01_01.pdf">https://ocw.mit.edu/courses/aeronautics-and-astronautics/16-885j-aircraft-systems-engineering-fall-2005/readings/sefguide_01_01.pdf</a>
<b>AIR VEHICLE DESIGN (AVD)</b>			
AVD 1	Nicolai, L.M. and Carichner, G.E.	<b>Fundamentals of Aircraft and Airship Design, Volume I—Aircraft Design</b> AIAA Education Series, AIAA, Reston, VA, 2010. <b>FIVE copies in ASDI Library</b>	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpFAADVIA3/viewerType:toc//root_slug:fundamentals-aircraft-2/url_slug:fundamentals-aircraft-2">https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpFAADVIA3/viewerType:toc//root_slug:fundamentals-aircraft-2/url_slug:fundamentals-aircraft-2</a>
AVD 2	Raymer, D.P.	<b>Aircraft Design : A Conceptual Approach</b> AIAA Education Series, AIAA, Reston, VA, 2012. <b>FOUR copies in ASDI Library</b>	
AVD 3	Gundlach, J.	<b>Designing Unmanned Aircraft Systems: A Comprehensive Approach</b> AIAA Education Series, AIAA, Reston, VA, 2012. <b>ONE copy in ASDI Library</b>	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpDUASACA1/viewerType:toc//root_slug:designing-unmanned-aircraft?kpromoter=marc">https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpDUASACA1/viewerType:toc//root_slug:designing-unmanned-aircraft?kpromoter=marc</a>
AVD 4	Gudmundsson, S.	<b>General Aviation Aircraft Design: Applied Methods and Procedures</b> 1 <sup>st</sup> Ed., Butterworth-Heinemann, September 2013.	<a href="https://www.sciencedirect-com.ezproxy.lib.vt.edu/book/9780123973085/general-aviation-aircraft-design">https://www.sciencedirect-com.ezproxy.lib.vt.edu/book/9780123973085/general-aviation-aircraft-design</a>
AVD 5	Sadraey, M.H.	<b>Aircraft Design: A Systems Engineering Approach</b> John Wiley & Sons, Inc., 2013.	<a href="https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/9781118352700">https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/9781118352700</a>
AVD 6	Kirschbaum, N. and Mason, W.H.	<b>Aircraft Design Handbook: Aircraft Design Aid and Layout Guide</b> VPI Aircraft Design Series, 1992-93. <b>EIGHT copies in ASDI Library</b>	
AVD 7	Roskam, J.	<b>Aircraft Design, Parts 1-8</b> Roskam Aviation and Engineering Corp., Lawrence, KS, 1985. <b>TWO complete sets in ASDI Library</b>	
AVD 8	Kundu, A.K.	<b>Aircraft Design</b> Cambridge University Press, 2010.	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpAD000013/viewerType:toc//root_slug:aircraft-design/url_slug:aircraft-design">https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpAD000013/viewerType:toc//root_slug:aircraft-design/url_slug:aircraft-design</a>
AVD 9	Torenbeek, E.	<b>Advanced Aircraft Design: Conceptual Design, Analysis and Optimization of Subsonic Civil Airplanes</b> John Wiley and Sons, Ltd., June 2013.	<a href="https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/9781118568101">https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/9781118568101</a>
AVD 10	Loftin, Jr., L.K.	<b>Subsonic Aircraft: Evolution and the Matching of Size to Performance</b> NASA Reference Publication 1060, 1980.	<a href="https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19800020744.pdf">https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19800020744.pdf</a>
AVD 11	Kuchemann, D.	<b>The Aerodynamic Design of Aircraft</b> Pergamon Press, New York, 1978.	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpADA0000T/viewerType:toc//root_slug:aerodynamic-design-aircraft/url_slug:references-pages-515?b-q=aerodynamica%20design%20of%20aircraft&amp;sort_on=default&amp;b-subscription=true&amp;b-group-by=true&amp;page=1&amp;b-s">https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpADA0000T/viewerType:toc//root_slug:aerodynamic-design-aircraft/url_slug:references-pages-515?b-q=aerodynamica%20design%20of%20aircraft&amp;sort_on=default&amp;b-subscription=true&amp;b-group-by=true&amp;page=1&amp;b-s</a>
AVD 12	Corning, G.	<b>Supersonic and Subsonic Airplane Design</b> Braun-Brumfield, Inc., Ann Arbor, MI, 1964. <b>ONE copy in ASDI Library</b>	
AVD 13	Schaufele, R.D.	<b>The Elements of Aircraft Preliminary Design</b> Aries Publications, 2000.	
AVD 14	Fielding, J.P.	<b>Introduction to Aircraft Design</b> 2 <sup>nd</sup> Edition, Cambridge University Press, New York, NY, 2017.	
AVD 15	Jenkinson, L.R., Simpkin, P., and Rhodes, D.	<b>Civil Jet Aircraft Design</b> Co-published by AIAA, Reston, VA, 1999.	
AVD 16	Stinton, D.	<b>The Design of the Aeroplane</b> Van Nostrand Reinhold Co., New York, NY, 1983.	
AVD 17	Wood, K.D.	<b>Aerospace Vehicle Design Vol. I. Aircraft Design</b> Johnson Publishing Co., Boulder, CO, 1968.	

AVD 18	Raymer, D.P.	<b>Enhancing Aircraft Conceptual Design using Multidisciplinary Optimization</b> Doctoral Thesis, Department of Aeronautics, Royal Institute of Technology, Stockholm, Sweden, Report 2002-2, May 2002. <b>ONE copy in ASDI Library</b>	<a href="http://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A9120&amp;dsid=_new">http://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A9120&amp;dsid=_new</a>
AVD 19	Carichner, G.E., and Nicolai, L.M.	<b>Fundamentals of Aircraft and Airship Design , Volume II—Airship Design and Case Studies</b> AIAA Education Series, AIAA, Reston, VA, 2010. <b>ONE copy in ASDI Library</b>	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpFAADVADF/viewerType:toc//root_slug:fundamentals-of-aircraft?kpromoter=marc">https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpFAADVADF/viewerType:toc//root_slug:fundamentals-of-aircraft?kpromoter=marc</a>
AVD 20	Nicolai, L.M.	<b>Lessons Learned: A Guide to Improved Aircraft Design</b> AIAA Library of Flight, AIAA, Reston, VA, 2016.	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpEGPDSB01/viewerType:toc//root_slug:lessons-learned-guide?url_slug:lessons-learned-guide?b-q=Lessons%20Learned%3A%20A%20Guide%20to%20Improved%20Aircraft%20Design&amp;sort_on=default&amp;b-subscription=true&amp;">https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpEGPDSB01/viewerType:toc//root_slug:lessons-learned-guide?url_slug:lessons-learned-guide?b-q=Lessons%20Learned%3A%20A%20Guide%20to%20Improved%20Aircraft%20Design&amp;sort_on=default&amp;b-subscription=true&amp;</a>
AVD 21	Jenkinson, L.R., and Marchman, J.F.	<b>Aircraft Design Projects for Engineering Students</b> Co-published by AIAA, Reston, VA, 1999.	<a href="https://web-s-ebcohost-com.ezproxy.lib.vt.edu/ehost/ebookviewer/ebook?sid=615c9cc6-9b5a-4bc2-8698-82e66a81e242%40redis&amp;vid=0&amp;format=EB">https://web-s-ebcohost-com.ezproxy.lib.vt.edu/ehost/ebookviewer/ebook?sid=615c9cc6-9b5a-4bc2-8698-82e66a81e242%40redis&amp;vid=0&amp;format=EB</a>
<b>FLIGHT MECHANICS (FM)</b>			
FM 1	Pamadi, B.N.	<b>Performance, Stability, Dynamics, and Control of Airplanes</b> 3rd edition, AIAA Education Series, AIAA, Reston, VA, 2015. <b>ONE copy in ASDI Library</b>	<a href="https://ebookcentral.proquest.com/lib/vt/detail.action?docID=3111614">https://ebookcentral.proquest.com/lib/vt/detail.action?docID=3111614</a>
FM 2	Yechout, T.R. with Morris, S.L., Bossert, D.E., and Hallgren, W.F.	<b>Introduction to Aircraft Flight Mechanics: Performance, Static Stability, Dynamic Stability, and Classical Feedback Control</b> AIAA Education Series, AIAA, Reston, VA, 2003. <b>ONE copy in ASDI Library</b>	
FM 3	Stinton, D.	<b>Flying Qualities and Flight Testing of the Airplane</b> AIAA Education Series, AIAA, Reston, VA, 1996. <b>ONE copy in ASDI Library</b>	
FM 4	Filippone, A.	<b>Advanced Aircraft Flight Performance</b> 2 <sup>nd</sup> edition, AIAA Education Series, AIAA, Reston, VA, 1996. <b>ONE copy in ASDI Library</b>	
<b>PROPULSION SYSTEMS (PS)</b>			
PS 1	Mattingly, J.D.	<b>Elements of Propulsion: Gas Turbines and Rockets</b> AIAA Education Series, AIAA, Reston, VA, 2006.	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/view/khtml/show.v/rcid:kpEPGTR002/cid:kt0046LK6H/viewerType:khtml//root_slug:1-introduction/url_slug:introduction-2?kpromoter=marc&amp;b-toc-cid=kpEPGTR002&amp;b-toc-root-slug=&amp;b-toc-url-slug:introduction-2&amp;b-toc-titl">https://app-knovel-com.ezproxy.lib.vt.edu/web/view/khtml/show.v/rcid:kpEPGTR002/cid:kt0046LK6H/viewerType:khtml//root_slug:1-introduction/url_slug:introduction-2?kpromoter=marc&amp;b-toc-cid=kpEPGTR002&amp;b-toc-root-slug=&amp;b-toc-url-slug:introduction-2&amp;b-toc-titl</a>
PS 2	Oats, G.C., Editor	<b>Aircraft Propulsion Systems Technology and Design</b> AIAA Education Series, AIAA, Washington, D.C., 1989. <b>ONE copy in ASDI Library</b>	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpAPSTD00K/viewerType:toc/root_slug:aircraft-propulsion-systems?kpromoter=federation">https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpAPSTD00K/viewerType:toc/root_slug:aircraft-propulsion-systems?kpromoter=federation</a>
PS 3	Mattingly, J.D., Heiser, W.H., and Daley, D.H.	<b>Aircraft Engine Design</b> 2 <sup>nd</sup> ed., AIAA Education Series, AIAA, Reston, VA, 2002	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/view/khtml/show.v/rcid:kpAEDE000/cid:kt0046IK63/viewerType:khtml//root_slug:aircraft-engine-design/url_slug:front-matter?b-toc-cid=kpAEDE000&amp;b-toc-slug=aircraft-engine-design&amp;b-toc-title=Aircraft%20Engi">https://app-knovel-com.ezproxy.lib.vt.edu/web/view/khtml/show.v/rcid:kpAEDE000/cid:kt0046IK63/viewerType:khtml//root_slug:aircraft-engine-design/url_slug:front-matter?b-toc-cid=kpAEDE000&amp;b-toc-slug=aircraft-engine-design&amp;b-toc-title=Aircraft%20Engi</a>
PS 4	Seddon, J., and Goldsmith, E.L.	<b>Intake aerodynamics</b> Blackwell Publishing Limited, 1999.	<a href="https://viewer-ebcohost-com.ezproxy.lib.vt.edu/EbscoViewerService/ebook?an=51706&amp;callbackUrl=http%3a%2f%2fresearch.ebsco.com&amp;db=nlebk&amp;format=EB&amp;proflid=ehost&amp;lpid=&amp;pid=&amp;lang=en&amp;location=https%3a%2f%2fresearch.ebsco-com.ezproxy.lib.vt.edu%2fc%2fw5gwtr%2f">https://viewer-ebcohost-com.ezproxy.lib.vt.edu/EbscoViewerService/ebook?an=51706&amp;callbackUrl=http%3a%2f%2fresearch.ebsco.com&amp;db=nlebk&amp;format=EB&amp;proflid=ehost&amp;lpid=&amp;pid=&amp;lang=en&amp;location=https%3a%2f%2fresearch.ebsco-com.ezproxy.lib.vt.edu%2fc%2fw5gwtr%2f</a>
<b>STRUCTURES (STR)</b>			
STR 1	Niu, Michael C.Y.	<b>Airframe Structural Design</b> 2nd Ed., Adaso/Adastra Engineering Center, 2011. <b>ONE copy in ASDI Library</b>	
STR 2	Niu, Michael C.Y.	<b>Composite Airframe Structure</b> 3rd Ed., Hong Kong Conmillit Press Ltd., 2010. <b>ONE copy in ASDI Library</b>	
<b>AIRCRAFT SUBSYSTEMS (AS)</b>			
AS 1	Moir, I., and Seabridge, A.	<b>Design and Development of Aircraft Systems</b> 2nd ed., John Wiley and Sons, Ltd., November 2012.	<a href="https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/9781118469156">https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/9781118469156</a>
AS 2	Moir, I., and Seabridge, A.	<b>Aircraft Systems: Mechanical, Electrical, and Avionics Subsystems Integration</b> 3 <sup>rd</sup> ed., AIAA Education Series, AIAA, Reston, VA, 2008. <b>ONE copy in ASDI Library</b>	<a href="https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/9780470770931">https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/9780470770931</a>
AS 3	Moir, I., Seabridge, A., and Jukes, M.	<b>Civil Avionics Systems</b> 2 <sup>nd</sup> ed., John Wiley and Sons, Ltd., November 2013. <b>ONE copy in ASDI Library</b>	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpAPSTD00K/viewerType:toc/root_slug:aircraft-propulsion-systems?kpromoter=federation">https://app-knovel-com.ezproxy.lib.vt.edu/web/toc.v/cid:kpAPSTD00K/viewerType:toc/root_slug:aircraft-propulsion-systems?kpromoter=federation</a>
AS 4	Moir, I., and Seabridge, A.	<b>Military Avionics Systems</b> AIAA Education Series, AIAA, Reston, VA, 2006. <b>ONE copy in ASDI Library</b>	<a href="https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/0470035463">https://onlinelibrary-wiley-com.ezproxy.lib.vt.edu/doi/book/10.1002/0470035463</a>
AS 5	Currey, N.S.	<b>Aircraft Landing Gear Design: Principles and Practices</b> AIAA Education Series, AIAA, Reston, VA, 1988.	<a href="https://app-knovel-com.ezproxy.lib.vt.edu/web/view/khtml/show.v/rcid:kpALGDPP06/cid:kt0046LBG2/viewerType:khtml//root_slug:title-page/url_slug:title-page?b-toc-cid=kpALGDPP06&amp;b-toc-title=Aircraft%20Landing%20Gear%20Design%20-%20Principles%20and%20Practice">https://app-knovel-com.ezproxy.lib.vt.edu/web/view/khtml/show.v/rcid:kpALGDPP06/cid:kt0046LBG2/viewerType:khtml//root_slug:title-page/url_slug:title-page?b-toc-cid=kpALGDPP06&amp;b-toc-title=Aircraft%20Landing%20Gear%20Design%20-%20Principles%20and%20Practice</a>
<b>PROJECT MANAGEMENT (PM)</b>			
PM 1	Ruskin, A.M., and Estes, W.E.	<b>What Every Engineer Should Know About Project Management</b> 2 <sup>nd</sup> Ed., Marcel Dekker, Inc., New York, NY, 1995. <b>ONE copy in ASDI Library</b>	

PM 2	Anon.	<b>A Guide to the Project Management Body of Knowledge (PMBOK® Guide)</b> 3 <sup>rd</sup> Edition, Project Management Institute, Inc., 2004.	
PM 3	Haimes, Y.Y.	<b>Risk Modeling, Assessment, and Management</b> 3 <sup>rd</sup> Ed., Johns Wiley & Sons., 2009.	<a href="https://ebookcentral.proquest.com/lib/vt/detail.action?docID=4040554">https://ebookcentral.proquest.com/lib/vt/detail.action?docID=4040554</a>
<b>ETHICS &amp; INTEGRITY (EI)</b>			
EI 1	Hoover, K., Fowler, W.T. and Stearman, R.O.	<b>Studies in Ethics, Safety, and Liability for Engineers</b> The University of Texas at Austin, ca early 1990s	
EI 2	R.P. Boisjoly, E.F. Curtis, and Mellican, E.	<b>Roger Boisjoly and the Challenger Disaster: The Ethical Dimensions</b> Journal of Business Ethics, Vol. 8, No. 4, April 1989, pp. 217-230	<a href="https://link.springer.com/content/pdf/10.1007/BF00383335.pdf">https://link.springer.com/content/pdf/10.1007/BF00383335.pdf</a>
EI 3	McDonald, A.J. with Hansen, J.R.	<b>Truth, Lies, and O-Rings</b> University Press of Florida, Gainesville, FL 32611-2079, USA. 2009.	
EI 4	Anon.	<b>Professionalism/ The Ford Pinto Gas Tank Controversy</b>	<a href="https://en.wikibooks.org/wiki/Professionalism/The_Ford_Pinto_Gas_Tank_Controversy">https://en.wikibooks.org/wiki/Professionalism/The_Ford_Pinto_Gas_Tank_Controversy</a>
EI 5	Atiyeh, C.	<b>Everything You Need to Know about the VW Diesel-Emissions Scandal</b> Car & Driver, Dec 4, 2019.	<a href="https://www.caranddriver.com/news/a15339250/everything-you-need-to-know-about-the-vw-diesel-emissions-scandal/">https://www.caranddriver.com/news/a15339250/everything-you-need-to-know-about-the-vw-diesel-emissions-scandal/</a>