Instructors divide the topics in different ways into courses that have titles of Intermediate or Advanced Mechanics of Materials. Several books that are currently available under the two titles of Intermediate and Advanced Mechanics of Materials are compared on major topics and concepts. Boresi, Schmidt and Sidebottom in its various forms has been the dominant book for decades and is used for initial listing of topics. It is then followed by topics covered in other books that are not covered in Boresi et. al.

Author	Boresi, Schmidt and Sidebottom	Ugural and Fenster	Cook and Young	Solecki and Conant	Barber	Vable	Vable
Mechanics of Material Books with editions used for comparison	Advanced 5th Edition	Advanced 3rd Edition	Advanced 2nd Edition	Advanced 1st Edition	Intermediate 1st Edition	Intermediate 2nd Edition	Advanced 1st edition
Current Edition	6th Edition	5th Edition	2nd Edition	1st Edition	2nd Edition	2nd Edition	1st Edition
Publisher	John Wiley	Pearson	Pearson	Oxford	McGraw Hill	EEH	EEH
Pages	700	704	496	784	608	320	~235
Cost on Amazon (On 3/26/15)	$183.45	$124.99	$207.21	$167.22	$112.83	$48.44	**~95**
Topics							
Stress at a point	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stress transformation in 3D	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stress equilibrim equations	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strain at a point	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Non-linear strain	Yes	No	No	Yes	No	No	Yes
Strain transformation in 3-D	Yes	No	No	Yes	No	Yes	Yes
Strain compatibility equations	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Linear Anisotropic Material Models	Yes	No	No	Yes	No	Yes	Yes
Thermal strains and stresses	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inelastic Material Behaviour	Yes	Yes	Yes	No	Yes	Yes	Yes
Elastic-Perfectly plastic	Yes	Yes	Yes	No	Yes	Yes	Yes
Failure theories	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Energy methods	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Torsion of non-circular sections	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Membrane Analogy	Yes	Yes	Yes	Yes	No	Yes	Yes
Unsymmetrical bending	Yes	Yes	Yes	Yes	Yes	Yes	No
Shear Center	Yes	Yes	Yes	No	Yes	Yes	No
Curved Beams	Yes	Yes	Yes	Yes	Yes	Yes	No
Beams on elastic foundations	Yes	Yes	Yes	Yes	Yes	No	Yes
Thick cylinders	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stability of columns	Yes	Yes	Yes	Yes	Yes	No	Yes
Classical plate	Yes	Yes	Yes	Yes	No	No	Yes
Stress concentration	Yes	Yes	Yes	No	Yes	Yes	No
Stress intensity factor	Yes	No	Yes	Yes	Yes	Yes	No
Fatique	Yes	Yes	Yes	No	Yes	Yes	No
Viscoelastic	Yes	No	No	Yes	No	Yes	No
Contact stresses	Yes	Yes	Yes	No	No	No	No
Finite element method	Yes	Yes	No	Yes	Yes	No	Yes
Thin Shells	No	Yes	Yes	No	Yes	No	No
Stability of plates	No	No	No	Yes	No	No	No
Finite Difference Method	No	No	No	Yes	No	Yes	No
Piezoelectric materials	No	No	No	Yes	No	No	No
Piezoelectric beams	No	No	No	Yes	No	No	No
Non-classical 1-D structral members	No	No	No	No	No	Yes	Yes
Non-classical plate	No	No	No	No	No	No	Yes
Influence functions	No	No	No	Yes	No	No	Yes
Variational calculus	No	No	No	No	No	No	Yes
Indicial notation	No	Yes	No	No	No	No	Yes