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	Titolo	Small Spacecraft Development Project-Based Learning [[electronic resource]] : Implementation and Assessment of an Academic Program / / by Jeremy Straub, Ronald Arthur Marsh, David J. Whalen
	Pubbl/distr/stampa	Cham : , , : Springer International Publishing : , , : Imprint : Springer, , 2017
	ISBN	3-319-23645-8
	Edizione	[1st ed. 2017.]
	Descrizione fisica	1 online resource (XII, 231 p. 67 illus., 62 illus. in color.)
	Disciplina	607.11
	Soggetti	Technical education
		Educational technology
		Science education
		Engineering/Technology Education
		Educational Technology
		Science Education
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
	Nota di contenuto	1.Introduction -- 2.Why start a small spacecraft program? -- 3.To build, to buy, or in between? -- 4.Starting a small spacecraft program: types of programs and their benefits and drawbacks -- 5.Forming a program - funding and organizational issues -- 6.Forming a program: funding and organizational issues -- 7.Forming a program: technical and logistical issues -- 8.Setting educational goals and formative assessment -- 9.Summative assessment -- 10.Results of prior assessment work and its utility.
	Sommario/riassunto	This book provides the information that is required to start a small spacecraft program for educational purposes. This will include a discussion of multiple approaches to program formation and build / buy / hybrid decision considerations. The book also discusses how a CubeSat (or other small spacecraft program) can be integrated into course and/or program curriculum and the ancillary benefits that such a program can provide. The assessment of small spacecraft programs

and participatory project-based learning programs is also discussed extensively. The book presents prior work related to program assessment (both for a single program and internationally) and discusses how similar techniques can be utilized for both formative and summative assessment of a new program. The utility of these metrics (and past assessment of other programs) in gaining buy-in for program formation and funding is also considered. .