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Titolo	Engineering Design [[electronic resource]] : A Survival Guide to Senior Capstone / / by Cory J. Mettler
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Descrizione fisica	1 online resource (442 pages)
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Soggetti	Electronic circuits Engineering design Microprocessors Computer architecture Electronic Circuits and Systems Engineering Design Processor Architectures
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to Senior Design -- Meeting your design team for the first time (How to run an effective meeting) -- Daily Documentation (Engineering Notebooks) -- The Initiation Phase -- The Planning Phase -- The Execution Phase -- The Closing Phase.
Sommario/riassunto	Engineering Senior Design is perhaps the course that most resembles what an engineering professional will be required to do during their career; it is the bridge between the academic classroom and the engineering profession. This textbook will support students as they learn to apply their previously-developed skills to solve a complex engineering problem during a senior-level design course. This textbook follows the design life cycle from project initiation to completion and introduces students to many soft engineering skills, such as communication, scheduling, and technical writing, in the context of an engineering design. Students are instructed how to define an engineering problem with a valid problem statement and requirements document. They will conceptualize a complex solution and divide that

solution into manageable subsystems. More importantly, they will be introduced to Project Management techniques that will help students organize workloads, develop functional engineering-teams, and validate solutions, all while increasing the likelihood of a successful completion to the project. Throughout the experience, students are instructed that a well-intentioned solution is not particularly useful unless it can be communicated and documented. To that end, this textbook will help students document their work in a professional manner and to present their ideas to stakeholders in a variety of formal design-reviews. With the support of this textbook, by the end of a student's senior design experience, each individual will be ready to communicate with other engineering professionals, effectively support engineering design-teams, and manage complex project to solve the next generation's engineering challenges. Presents material as the student will experience the design cycle, interweaving technical- and soft-skills; Highlights a prior capstone project throughout, providing students with a tangible example at each stage of the project; Uses anecdotes from industry, so students will appreciate the direct connection between their studies and the workplace.
