**6.7120 Principles of Modeling, Computing and Control for Decarbonized Electric Energy Systems  
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Undergrad (Fall)  
(Subject meets with [6.7121](https://student.mit.edu/catalog/m6c.html#6.7121))  
Prereq: [6.2200](https://student.mit.edu/catalog/m6b.html#6.2200), ([6.2000](https://student.mit.edu/catalog/m6b.html#6.2000) and [6.3100](https://student.mit.edu/catalog/m6c.html#6.3100)), or permission of instructor  
Units: 4-0-8  
[Add to schedule](https://student.mit.edu/catalog/editcookie.cgi?add=6.7120) **Lecture:** *MW10.30-12* ([26-322](http://whereis.mit.edu/map-jpg?mapterms=26)) **Recitation:** *R11* ([26-314](http://whereis.mit.edu/map-jpg?mapterms=26))  
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Introduces fundamentals of electric energy systems as complex dynamical network systems. Topics include coordinated and distributed modeling and control methods for efficient and reliable power generation, delivery, and consumption; data-enabled algorithms for integrating clean intermittent resources, storage, and flexible demand, including electric vehicles; examples of network congestion management, frequency, and voltage control in electrical grids at various scales; and design and operation of supporting markets. Students taking graduate version complete additional assignments.  
*M. Ilic*  
No textbook information available

**6.7121 Principles of Modeling, Computing and Control for Decarbonized Electric Energy Systems  
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Graduate (Fall)  
(Subject meets with [6.7120](https://student.mit.edu/catalog/m6c.html#6.7120))  
Prereq: [6.2200](https://student.mit.edu/catalog/m6b.html#6.2200), ([6.2000](https://student.mit.edu/catalog/m6b.html#6.2000) and [6.3100](https://student.mit.edu/catalog/m6c.html#6.3100)), or permission of instructor  
Units: 4-0-8  
[Add to schedule](https://student.mit.edu/catalog/editcookie.cgi?add=6.7121) **Lecture:** *MW10.30-12* ([26-322](http://whereis.mit.edu/map-jpg?mapterms=26)) **Recitation:** *R11* ([26-314](http://whereis.mit.edu/map-jpg?mapterms=26))  
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