STEM Courses at MIT's SPARK, March 11-12

https://esp.mit.edu/learn/Spark/2017/catalog

Computers and Programming

- How to Make the Perfect Button with CSS
- Algorithms of the Dummies, by the Dummies, for the Dummies
- Making Computers Great at Tic Tac Toe (and other two player games)
- Introduction to Sorting (w/ Python)
- The Singularity is Near; Post-Biological Reality
- How Do Computers Add?
- Intro to Technology: Arduinos
- What is a "what if"?
- How to build with redstone
- Intro to Circuits and Coding with Arduino
- Error-Detecting and -Correcting Codes
- Introduction to Linux and the Command Line
- Thinking Like a Computer - Boolean Logic
- How the Internet Works (and Security too!)
- 8 Bits Walk Across a Bridge

Engineering

- How do airplanes fly?
- What is Chemical Engineering?
- Virtual Reality (VR): The journey from content production in a 360 camera to the VR experience a user enjoys
- Materials Informatics
- Introduction to Electrical Engineering and data storage
- How to Breadboard for Dummies
- How to Circuit for Dummies, Level I
- How to Circuit for Dummies, Level II (I Heart Circuits)
- The Sexiest Job of the 21st Century: Data Science
- Rockets!
- Photonics Integration
- Nanotechnology Enabled Artificial Cells
- Exploring Aerospace!
- 5 steps, 5 people, 5 minutes: engineering principles of manufacturing
- Lego Robotics
- LED Light Strip Programming with Arduino!
- 2D and 3D Technical Drawing
- Origami Electronics

Life Sciences

- Sustainability 101: How to Save the World One Day at a Time
- Life
- How the Snake Lost its Legs
- CRISPR: from Bacteria to Biotech
- How to Distinguish Medical Knowledge from Hoaxes?
- Microbiome 101: What's in your poop?
- Amazing Insects
- Should you eat your siblings?: Being Social in the Animal World
- Don't Touch the King Cobra: An Introduction to Venomous Creatures
- How to Kill Everything: A Practical Guide to Mass Extinctions
- What's in the Vial? An Introduction to Bioanalytical Techniques
- Craniofacial Anatomy
- PCR: the secret DNA copy machine
- The Sickest Class You'll Ever Take (Immunology 101)
- The Plague
- Optical Illusions: The Eye, The Brain, and Everything In-between
- The Miracle of Life
- The Sea-cret Life of Fish

Mathematics

- Point and Laugh at Bad Math
- Cryptography: Making and breaking secret codes
- Taking apart spheres: an introduction to topology
- Finite Automata
- Chaotic Reduction: Play the Math
- Poker Theory 101
- Information and the Redundancy of English
- Counting Past Infinity
- Cellular Automata
- Ramsey Theory
- Dutch Books, Probability, and Logical Induction
- The Euclidean Algorithm
- In(tro)duction to Induction
- Introduction to Trading
- Everyday Shapes like you've never seen them before
- The Math Behind Poker
- Compass-and-straightedge constructions
- Fun with Invariants!
- Fun with Pigeonhole Principle
- Reasoning about Infinity

Physical Sciences

- Science in the Trump Era
- Understanding Weather Data

- Introduction to Astrophysics I
- Introduction to Astrophysics II
- Introduction to Astrophysics III
- Cool Predictions of Quantum Physics
- Sounds, Waves, and Electricity
- Chemistry of Pyrotechnics
- Your classical intuition is wrong!
- Special Relativity (and Time Travel ¯_(ツ)_/¯)
- Thinking Fundamentally: a Way to Understand World
- Physics of Life
- The Bit and the Atom
- Anything you could want to know about the oceans
- Why Earth can't just sit still
- Introuction to Orbital Dynamics and Space Propulsion
- How we make energy
- I've been Slimed
- Basic Chemistry
- Intro to Geology!