INTERNET OF THINGS
ROADMAP TO A CONNECTED WORLD

COURSE NAME: Internet of Things: Roadmap to a Connected World

COURSE STARTS: MARCH 28, 2017 | **DURATION:** 6 WEEKS

COURSE INFORMATION ONLINE: digitalprograms.mit.edu/iot

LOCATION: Online | **CEUs:** 1.2 | **COST:** $495 | **CONTACT:** mitprofessionalx@mit.edu

COURSE DESCRIPTION

By 2020, there will be 50 billion devices connected to the Internet. How will you capitalize on this tremendous opportunity? Gain important insights into this groundbreaking evolution that's redefining hardware, software, and data by participating in this six-week online course. Led by a team of world-renowned researchers, MIT Professional Education's **Internet of Things: Roadmap to a Connected World** course offers the tools you need to develop and implement your own IOT technologies, solutions, and applications.

KEY BENEFITS

During this self-paced, online course, you will:

- Deepen your understanding of key IOT concepts including identification, sensors, localization, wireless protocols, data storage and security
- Explore IOT technologies, architectures, standards, and regulation
- Ascertain the value created by collecting, communicating, coordinating, and leveraging the data from connected devices
- Examine technological developments that are likely to shape the industrial landscape

"Internet of Things (IOT) is bound ultimately to affect almost every aspect of our lives. In fact, I encourage you to look around and try to figure out where the IOT won't be."

—SANJAY SARMA, VP OF OPEN LEARNING,
CO-CHAIR OF THE MIT AUTO-ID LABS
AND ONE OF THE ORIGINAL ARCHITECTS OF IOT AT MIT

COURSE FORMAT

Held over the course of six weeks, this course includes:

- Three modules covering 13 topic areas and 12 hours of video
- Assessments to reinforce key learning concepts presented in each module
- Short case studies and focused readings
- Discussion forums for participants to address thought-provoking questions posed by MIT faculty
- Community Wiki for accessing additional resources, suggested readings, and related links

EARN A CERTIFICATE AND CEUS

Participants who successfully complete all course requirements are eligible to receive a Certificate of Completion and 1.2 CEUs.

Massachusetts Institute of Technology

John Q. Professional

MIT | PROFESSIONAL EDUCATION
Digital Programs

Internet of Things:
Roadmap to a Connected World

WHO SHOULD ATTEND

This course is well suited for professionals with a background in electrical engineering or computer science. Specifically, it is ideally suited for individuals who want to leverage the Internet of Things to address business challenges including cybersecurity, system architecture, and data management. Because of the nature of this course, the information is applicable to people working in a variety of industries, from healthcare to telecommunication. Industries represented include:

- Manufacturing and supply chains
- Retail
- Transportation and logistics
- Healthcare
- Energy (oil and gas)
- Agriculture
- Financial
- Public sector
- Automotive
- Logistics
- Telecommunications
- Consumer products

COURSE OUTLINE

Module One
- Section A: Architectures
- Section B: The Web of Things
- Section C: Lessons from the Internet

Module Two: Technologies
- Section A: Wireless protocols
- Section B: Data storage and analysis
- Section C: Localization
- Section D: Security in IOT
- Section E: HCI and IOT World
- Section F: Robotics and Autonomous Vehicles

Module Three: Applications
- Section A: Smart Buildings
- Section B: Wireless Technologies for Indoor Localization, Smart Homes, and Smart Health
- Section C: Smart Cities

Conclusion: Roadmap of the Internet of Things (IOT)
- Utilizing sensors to gain greater visibility and real-time situational awareness
- Ways to act on the information collected, thereby controlling the real world
- Formulating an architecture that enables a macro picture of systems, an accessible design paradigm, and a set of interfaces which can be standardized
- A security paradigm, which considers setup, maintenance, and updating
- Vertical applications that provide a clear business case and a pressing opportunity
- Emerging technologies to address IOT challenges

INSTRUCTORS

Sanjay Sarma | Vice President for Open Learning; Office of Digital Learning; Department of Mechanical Engineering
FACULTY CO-DIRECTOR

Daniela Rus | Director, MIT Computer Science and Artificial Intelligence Laboratory; Professor, Electrical Engineering Computer Science
FACULTY CO-DIRECTOR

Tim Berners-Lee | Professor
MIT Computer Science and Artificial Intelligence Laboratory

David Clark | Senior Research Scientist
MIT Computer Science and Artificial Intelligence Laboratory

Hari Balakrishnan | Professor of Computer Science
MIT Computer Science and Artificial Intelligence Laboratory

Sam Madden | Professor of Electrical Engineering and Computer Science
MIT Computer Science and Artificial Intelligence Laboratory

Srini Devadas | Professor of Electrical Engineering and Computer Science
MIT Computer Science and Artificial Intelligence Laboratory

Jim Glass | Senior Research Scientist
MIT Computer Science and Artificial Intelligence Laboratory

John Leonard | Professor
MIT Computer Science and Artificial Intelligence Laboratory

Joe Paradiso | Associate Professor
MIT Media Lab

Dina Katabi | Professor
MIT Computer Science and Artificial Intelligence Laboratory

Carlo Ratti | Professor of the Practice
Director, MIT Senseable City Lab