

## MSMITE Restricted Electives

This list provides MSMITE courses that have been approved by the department. **The INI cannot guarantee that courses will be offered each semester or in a specific semester as advertised below. Likewise, the location listed is not guaranteed as campus course offerings constantly change.**

Students must refer to the 'Schedule of Classes' to determine course availability. In addition, the INI cannot guarantee that a student will be offered a seat in a specific course. These apply to courses at the INI as well as other departments at Carnegie Mellon. Students should always register under the INI course number (14-XXX) if a course is cross-listed with other departments. The numbers for cross-listed courses are provided to the right of the course titles below. **Please note: Course numbers and titles may change. If you notice such a change, please email [ini-academic@andrew.cmu.edu](mailto:ini-academic@andrew.cmu.edu) prior to enrolling in a course.**

- 05-670: Digital Service Innovation (PIT, 12 units)
- 05-833: Gadgets, Sensors & Activity Recognition in HCI (PIT, 12 units)
- 05-872: Rapid Prototyping of Computer Systems (PIT, 12 units, cross-listed 18-745/05-872)
- 10-714: Deep Learning Systems: Algorithms and Implementation (PIT, 12 units)
- 11-777: Multimodal Machine Learning (PIT, 12 units)
- 14-642: Fundamentals of Embedded Systems (SV & Broadcast to PIT, 12 units)
- 14-693: ST: Insights Into Technology Innovation Through Competition (SV & Broadcast to PIT, 6 units)
- 14-695: ST: Technical Entrepreneur Coaching Hub – TECH (SV & Broadcast to PIT, 6 units)
- 14-736: Distributed Systems: Techniques, Infrastructure and Services (SV & Broadcast to PIT, 12 units)
- 14-742: Security in Networked Systems (SV & Broadcast to PIT, 12 units)
- 14-744: Mobile and Embedded Software Design (SV & Broadcast to PIT, 12 units)
- 14-757: Introduction to Machine Learning with Adversaries in Mind (SV & Broadcast to PIT, 12 units)
- 14-760: Advanced Real-World Data Networks (SV & Broadcast to PIT, 12 units)
- 14-763: Systems and Toolchains for AI Engineering (PIT & Broadcast to SV, 12 units)
- 14-767: Wireless Protocols and Standards for the Internet of Things (IoT) (PIT & Broadcast to SV, 6 units)
- 14-825: Generative AI and Large Language Model (PIT & Broadcast to SV, 6 units)
- 14-829: Mobile and IoT Security (SV & Broadcast to PIT, 12 units)
- 14-848: Cloud Infrastructure and Services (PIT & Broadcast to SV, 12 units)
- 14-795: AI Applications in Information Security (PIT & Broadcast to SV, 12 units)
- 15-619: Cloud Computing (PIT & SV Remote), 15 units)
- 15-624: Logical Foundations of Cyber-Physical Systems (PIT, 12 units) (cross-listed 15-824)
- 15-640: Distributed Systems (PIT, 12 units)
- 15-719: Advanced Cloud Computing (PIT, 12 units) (cross-listed 18-709)
- 15-793: Secure Computer Systems (PIT, 12 units)
- 15-821: Mobile and Pervasive Computing (PIT, 12 units) (cross-listed 18-843)
- 16-720: Computer Vision (PIT, 12 units)
- 16-722: Sensing and Sensors (PIT, 12 units)
- 17-645: Machine Learning in Production (PIT, 12 units)
- 17-722: Building User-focused Sensing Systems (PIT, 12 units)

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17-728: Machine Learning and Sensing (PIT, 12 units)

17-781: Mobile and IoT Computing Services (PIT, 12 units)

18-731: Network Security (PIT, 12 units)

18-732: Secure Software Systems (PIT, 12 units)

18-759: Wireless Networks (PIT, 12 units)

49-788: Mobile Apps for the Internet of Things (SV, 12 units)

#### VERSION TABLE

VERSION	ADDED/ REMOVED	COURSES
8-17-20	Removed	08-723
7-1-21	Added	14-744, 15-821, 14-848
	Removed	18-747, 14-840, 18-744, 14-841
11-16-21	Removed	08-735
	Added	17-722
7-1-22	Removed	14-841, 08-736
	Added	14-742, 16-720, 11-777, 15-619, 15-719, 15-640
5-22-23	Added	14-757, 14-795, 14-763, 18-731, 18-732, 17-645
	Removed	18-651, 18-748
5-31-25	Added	10-714, 15-793
5-31-26	Added	14-693, 14-695, 14-767, 14-825