

MSIN Degree Specific Core Course List

Note: 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. These courses are 12 units unless otherwise noted.

Please note: Course numbers and titles may change. If you notice such a change, please email ini-academic@andrew.cmu.edu prior to enrolling in a course.

10-601 Introduction to Machine Learning
10-605 Machine Learning with Large Datasets
10-701 Introduction to Machine Learning (PhD)
10-714 Deep Learning Systems: Algorithms and Implementation
11-642 Search Engines
11-663 Applied Machine Learning (cross-listed 05-834)
11-685 Introduction to Deep Learning
14-735 Secure Coding
14-741 Introduction to Information Security
14-742 Security in Networked Systems
14-744 Mobile and Embedded Software Design
14-757 Introduction to Adversarial Machine Learning
14-760 Advanced Real-World Data Networks
14-795 AI Application in Information Security
14-819 Introduction to Software Reverse-Engineering
14-829 Mobile & IoT Security
14-848 Cloud Infrastructure and Services
15-605 Operating System Design and Implementation
15-611 Compiler Design
15-618 Parallel Computer Architecture and Programming
15-619 Cloud Computing
15-641 Networking and the Internet
15-642 Machine Learning Systems
15-645 Database Systems
15-712 Advanced Operating Systems and Distributed Systems
15-719 Advanced Cloud Computing (cross-listed 18-709)
15-740 Computer Architecture
15-744 Computer Networks
15-745 Optimizing Compilers for Modern Architectures
15-793 Secure Computer Systems
17-715 Microarchitectural Security
18-645 How to Write Fast Code

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18-648 Real-Time Embedded Systems
18-649 Distributed Embedded Systems
18-730 Introduction to Computer Security
18-731 Network Security
18-732 Secure Software Systems
18-740 Modern Computer Architecture and Design
18-746 Storage Systems (cross-listed 15-746)
18-750 Wireless Networks and Applications
18-756 Packet Switching and Computer Networks
18-758 Wireless Communications
18-845 Internet Services

VERSION TABLE

***Notates dates courses were added or removed from the list.**

| Date | ADDED/REMOVED | COURSES |
|----------|---------------|--|
| 6-16-15 | ADDED | 10-601, 14-819, 15-611, 15-612, 15-615, 15-618, 15-619, 15-640, 15-641, 15-740, 15-745, 18-645, 18-740 |
| 9-14-16 | ADDED | 10-701, 15-719 18-749 |
| 1-25-17 | ADDED | 11-663, 15-605 |
| 8-7-17 | ADDED | 15-645 |
| 8-21-17 | REMOVED | 19-712, 19-713, 19-608, 14-817, 18-739A, 18-739C, 18-799K, 18-859, 18-859C, 18-859H, 18-859K, 18-794, 18-798, 18-630, 14-827, 14-837 |
| 8-30-17 | ADDED | 14-848 |
| 12-13-17 | REMOVED | 15-640, 18-749, 18-842 |
| 10-25-18 | ADDED | 14-760 |
| 5-6-19 | ADDED | 18-651 |
| 8-10-21 | REMOVED | 14-841, 14-840, 15-641, 18-759 |
| | ADDED | 14-744, 18-750 |
| 7-1-22 | REMOVED | 14-814, 15-615, 15-839, 18-651 |
| | ADDED | 15-641, 10-605 |
| 5-22-23 | ADDED | 10-605, 11-642, 11-685, 14-757, 14-795, 14-742, 14-735 |
| | REMOVED | 15-612, 18-748, 18-757 |
| 5-31-24 | ADDED | 15-793 |
| 5-31-25 | ADDED | 15-642, 10-714, 17-715 |

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