

# Heinz College MSIT ONLINE Courses

## TENTATIVE PROJECTED Schedule - Effective Spring 2019

This **tentative, projected** schedule is for planning purposes only and **subject to change without notice**. The **95/94 level courses are specifically for Heinz College's MSIT part-time students**. (Some exceptions for other Heinz programs and MSIT students at the Rwanda and Australia campuses will be considered.) The other course #'s are from other departments for which we have secured permission for Heinz MSITs to enroll. **Refer to the HUB's Schedule of Classes for current schedules**. **All students will get waitlisted** and you must **sign up at least 1 week prior to the semester start date** to ensure timely preparation for these classes.

### FALL (F19 and beyond) - late August to early December (includes mini 1,2)

95-734 Z Managing Digital Business (*replaces 95-730 Z E-business Technology & Management eff F19*)  
 95-758 Z Network and Internet Security [Prereq: 95-752]  
 95-833 Z Global IT Management, Sourcing & Automation  
 15-619 B Cloud Computing [Prereq: *extensive Java programming and time commitment required! This is a CS School course!*]

**F19 only, then discontinued:** 17-652 D Methods: Design of Software Systems

#### FALL MINI-1 [M1: late August to mid-October]

#### FALL MINI-2 [M2: mid-October to early December]

95706-Z1 Object-oriented Analysis & Design [Prereq:95-807]  
 95794-Z1 Tech Startup I: Market Discovery  
 95796-Z1 Statistics for IT Managers  
 95797-Z1 Data Warehousing [Prereq: 95-703]

94842-Z2 Programming R for Analytics [Prereq:95-796]  
 95799-Z2 Linux & Open Source  
 95808-Z2 IT Project Management  
 95866-Z2 Adv Business Analytics [Prereq:95-796, 95-791]

**NEW IN F19:** 95898-Z1 Intro to Python Programming

95748-Z2 Software and Security [Prereq: 95-752; 898 suggested]

95852-Z1 Applied Data Science - **LAST RUN F18, replaced by 95-865**

05863-A2 Intro to Human Computer Interaction (*was 95-763*)

### SPRING (S19 and beyond) - mid January to early May (includes mini 3, 4)

95-703 Z Database Management  
 95-752 Z Intro to Information Security Management  
 95-807 Z Object Oriented Programming (Java) for Managers [Prereq: *undergrad level prog class or equiv work exp*]

**EVEN YRS ONLY:** 95-771 Z Data Structures & Algorithms [Prereq: 95-807, 95-712 or equiv Java work exp]

15-619 B Cloud Computing [Prereq: *extensive Java programming and time commitment required! This is a CS School course!*]

**S19 only, then discontinued:** 17-654 D Analysis of Software Artifacts [*recent discrete math course and programming experience*]

#### SPRING MINI-3 [M3: mid-January to mid-March]

#### SPRING MINI-4 [M4: mid-March to early May]

**EFF S20:** 95791-Z3 Data Mining [Prereq: 95-796; R prog]  
**NEW IN S20-EVEN YRS ONLY:** 95870-Z3 Managing Analytics Projects [Prereq: 95-796 and prog in R, Python or SAS]  
**EFF S20:** 95883-Z3 Ethical Penetration Testing [Recommend 95-799 or linux exp]  
 95744-Z3 Cybersecurity Policy & Governance I  
 94774-Z3 Business Process Modeling

**S19 only:** 95791-Z4 Data Mining [Prereq: 95-796; R prog]  
**NEW IN S20:** 95865-Z4 Unstructured Data Analytics [Prereq: 95-796, 95-898] (*replaces 95-852 Applied Data Science*)  
 94806-Z4 Privacy in the Digital Age  
 95755-Z4 Info Security Risk Management I  
 95722-Z4 Digital Transformation  
 91869-Z4 Conflict Resolution

### SUMMER (M19 and beyond) - late May to early August (includes mini 5, 6)

94-802 Z Geographic Information Systems [*database prereq for non-MSIT students*]  
 95-705 Z Telecommunications Management  
 17-653 D Managing Software Development [Prereq:95-807 or familiarity with software dev]

**EVEN YEARS ONLY:** 95-889 Z Applied Threat Analysis

**NEW IN M19 ONLY:** 95-855 Z Network Situational Awareness (*moves to 6 unit version in M21*)

#### SUMMER MINI-5 [M5: late May to late June]

#### SUMMER MINI-6 [M6: late June to early August]

95868-Z5 Exploring & Visualizing Data [Prereq: 95-796]  
 95884-Z5 Network Defenses [Recommend 95-799 or linux exp]  
**EFF M21-ODD YRS:** 95855-Z5 Network Traffic Analysis  
 94811-Z5 Strategy Development  
 91717-Z5 Business Writing for Leaders  
 17638-A5 Systems Architecture for Mgrs [Prereq:95-807]

95710-Z6 Economic Analysis  
 95737-Z6 NoSQL Database Management [Prereq: 95-703]  
**ODD YRS:** 95749-Z6 Cryptography [Prereq: 95-752]  
 95760-Z6 Decsn Making Under Uncertainty [Prereq: 95-796]  
 91869-Z6 Conflict Resolution

## Heinz College MSIT Program Current List of ONLINE Courses Available

**This catalog is expressly for Heinz College's MSIT online program. It is TENTATIVE and SUBJECT TO CHANGE without notice. Each degree requires 60 units of CORE (as checked below) and 84 units of Elective (anything else in this list). Current course schedules are posted at the HUB. Our online courses will be denoted with "Z" in the section letter. Questions? Contact [heinz-msit@andrew.cmu.edu](mailto:heinz-msit@andrew.cmu.edu).**

| Course #               | Course Title                                  | Units | Prereq  | Typically Offered          | CORE: IT Mgt                        | CORE: InfoSec                       | CORE: BIDA                          | CORE: SW Mgt                                   |
|------------------------|---|-------|---|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| <a href="#">95-703</a> | Database Management                           | 12    |   | Spring                     | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>            |
| <a href="#">95-705</a> | Telecommunications Management                 | 12    |   | Summer                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |  |
| <a href="#">95-706</a> | Object Oriented Analysis & Design             | 6     | 95-807 or 95-712  | Fall M1                    | <input checked="" type="checkbox"/> |                                     |                                     | <input checked="" type="checkbox"/>            |
| <a href="#">95-710</a> | Economic Analysis                             | 6     |   | Summer M6                  |                                     |                                     | <input checked="" type="checkbox"/> |  |
| <a href="#">95-722</a> | Digital Transformation                        | 6     |   | Spring M4                  |                                     |                                     |                                     |  |
| <a href="#">95-734</a> | Managing Digital Business                     | 12    | <b>None; replaces 95-730 e-bus tech &amp; mgmt</b>                        | Fall                       | <input checked="" type="checkbox"/> |                                     |                                     |  |
| <a href="#">95-737</a> | NoSQL Database Management                     | 6     | 95-703  | Summer M6                  |                                     |                                     |                                     |  |
| <a href="#">95-744</a> | Cybersecurity Policy & Governance             | 6     |   | Spring M3                  |                                     | <input checked="" type="checkbox"/> |                                     |  |
| <a href="#">95-748</a> | Software & Security                           | 6     | 95-752; some prog experience suggested                                    | Fall M2                    |                                     | <input checked="" type="checkbox"/> |                                     |  |
| <a href="#">95-749</a> | Cryptography                                  | 6     |   | Summer M6-<br>ODD yrs only |                                     |                                     |                                     |  |
| <a href="#">95-752</a> | Intro to Info Security Management             | 12    |   | Spring                     |                                     | <input checked="" type="checkbox"/> |                                     |  |
| <a href="#">95-755</a> | Information Security Risk Management I        | 6     |   | Spring M4                  |                                     | <input checked="" type="checkbox"/> |                                     |  |
| <a href="#">95-758</a> | Network & Internet Security                   | 12    | 95-752  | Fall                       |                                     | <input checked="" type="checkbox"/> |                                     |  |
| <a href="#">95-760</a> | Decision Making Under Uncertainty             | 6     | 95-796  | Summer M6                  |                                     |                                     |                                     |  |
| <a href="#">95-771</a> | Data Structures & Algorithms                  | 12    | 95-807, 95-712 <u>or</u><br>equiv OO prog exp                             | Spring-EVEN<br>yrs only    |                                     |                                     |                                     | <input checked="" type="checkbox"/>            |
| <a href="#">95-791</a> | Data Mining                                   | 6     | 95-796 required; 94-842, 95-868 or prior R prog exp is HIGHLY recommended | Spr19 M4 then moves to M3  |                                     |                                     | <input checked="" type="checkbox"/> |  |
| <a href="#">95-794</a> | Tech Startup I: Market Discovery              | 6     |   | Fall M1                    |                                     |                                     |                                     |  |
| <a href="#">95-796</a> | Statistics for IT Managers                    | 6     |   | Fall M1                    |                                     |                                     | <input checked="" type="checkbox"/> |  |
| <a href="#">95-797</a> | Data Warehousing                              | 6     | 95-703  | Fall M1                    |                                     |                                     | <input checked="" type="checkbox"/> |  |
| <a href="#">95-799</a> | Linux & Open Source                           | 6     | See online description for soft prereqs.                                  | Fall M2                    |                                     |                                     |                                     |  |
| <a href="#">95-807</a> | Object Oriented Programming for IT Managers   | 12    |   | Spring                     | <input checked="" type="checkbox"/> |                                     |                                     | Automatic exemption based on admission prereqs |
| <a href="#">95-808</a> | IT Project Management                         | 6     |   | Fall M2                    | <input checked="" type="checkbox"/> |                                     |                                     | <input checked="" type="checkbox"/>            |
| <a href="#">95-833</a> | Global IT Management, Sourcing & Automation   | 12    |   | Fall                       |                                     |                                     |                                     |  |
| <a href="#">95-852</a> | Applied Data Science<br><i>(discontinued)</i> | 6     |   | Replaced by 95-865         |                                     |                                     |                                     |  |

| Course #  | Course Title   | Units | Prereq   | Typically Offered                   | CORE: IT Mgt | CORE: InfoSec                       | CORE: BIDA                          | CORE: SW Mgt                        |
|---|--|-------|--|-------------------------------------|--------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <a href="#">95-855</a>                                  | Network Situational Awareness  | 12    |  | Summer 2019 only                    |              |                                     |                                     |                                     |
| <a href="#">95-855</a>                                  | Network Traffic Analysis   | 6     |  | NEW in Summer 2021 M5               |              |                                     |                                     |                                     |
| <a href="#">95-865</a>                                  | Unstructured Data Analytics<br>(replaces 95-852 Appl Data Sci)             | 6     | 95-796, 95-898   | NEW in Spring 2020 M4               |              |                                     | <input checked="" type="checkbox"/> |                                     |
| <a href="#">95-866</a>                                  | Advanced Business Analytics  | 6     | 95-796, 95-791   | Fall M2                             |              |                                     | <input checked="" type="checkbox"/> |                                     |
| <a href="#">95-868</a>                                  | Exploring & Visualizing Data   | 6     | 95-796 required; 94-842 or R prog exp suggested  | Summer M5                           |              |                                     | <input checked="" type="checkbox"/> |                                     |
| <a href="#">95-870</a>                                  | Managing Analytics Projects  | 6     | 95-796 and exp with one analytics environ (e.g. R, Python, SAS)                                  | NEW in Spring 2020 M3-EVEN yrs only |              |                                     |                                     |                                     |
| <a href="#">95-883</a>                                  | Ethical Penetration Testing  | 6     | Recommend linux exp or 95-884 or 95-799  | NEW in Spring 2020 M3               |              |                                     |                                     |                                     |
| <a href="#">95-884</a>                                  | Network Defenses   | 6     | Recommend 95-799   | Summer M5                           |              |                                     |                                     |                                     |
| <a href="#">95-889</a>                                  | Applied Threat Analysis  | 12    |  | NEW in Summer 2018-EVEN yrs only    |              |                                     |                                     |                                     |
| <a href="#">95-898</a>                                  | Intro to Python Programming  | 6     | Suitable for any MSIT major  | NEW in Fall 2019 M1                 |              |                                     |                                     |                                     |
| <a href="#">94-774</a>                                  | Business Process Modeling  | 6     | <a href="#">95-796 stats or refresher (e.g. CMU OLI) helpful</a>                                 | Spring M3                           |              |                                     |                                     |                                     |
| <a href="#">94-802</a>                                  | Geographic Information Systems   | 12    | Database course required for non-MSIT students   | Summer                              |              |                                     |                                     |                                     |
| <a href="#">94-806</a>                                  | Privacy in the Digital Age   | 6     |  | Spring M3                           |              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |
| <a href="#">94-811</a>                                  | Strategy Development   | 6     |  | Summer M5                           |              |                                     |                                     |                                     |
| <a href="#">94-842</a>                                  | Programming R for Analytics  | 6     | 95-796   | Fall M2                             |              |                                     |                                     |                                     |
| <b>ONLINE COURSES OFFERED BY OTHER CMU DEPARTMENTS:</b> |  |       |  |                                     |              |                                     |                                     |                                     |
| <a href="#">91-717</a>                                  | Business Writing for Leaders   | 6     |  | Summer M5                           |              |                                     |                                     |                                     |
| <a href="#">91-869</a>                                  | Conflict Resolution  | 6     | Very limited enrollment  | Spring M4, Summer M6                |              |                                     |                                     |                                     |
| <a href="#">17-653</a>                                  | Managing Software Development  | 12    | 95-807 or 95-712, <b>and</b> software eng exp  | Summer                              |              |                                     |                                     | <input checked="" type="checkbox"/> |
| <a href="#">17-655</a>                                  | Architectures of Software Systems  | 12    | 95-807 or 95-712, <b>and</b> software eng exp  | Spring                              |              |                                     |                                     | <input checked="" type="checkbox"/> |
| <a href="#">17-638</a>                                  | System Architecture for Managers   | 6     | 95-807 or 95-712, <b>and</b> software eng exp; can't do both 17-638 & its 12-unit version 17-655 | Summer M5                           |              |                                     |                                     |                                     |
| <a href="#">05-863</a>                                  | Intro to Human Computer Interaction  | 6     |  | Fall M2                             |              |                                     |                                     |                                     |
| <a href="#">15-619</a>                                  | Cloud Computing<br><i>Very CS-focused! READ THE COURSE LINK CAREFULLY!</i> | 12    | WARNING: Extensive prog, group work and time commitment!   | Fall, Spring                        |              |                                     |                                     |                                     |