

Applied Information Technology MS with Software Engineering Graduate Certificate (SWEN)-Course Checklist

Software Engineering Required Core Courses (15 units)

- 1. AIT 600 Information Technology Infrastructure (3 units)
- 2. AIT 624 Software Engineering Fundamentals (3 units) (*)
- 3. AIT 641 Software Requirements Engineering (3 units) (*)
- 4. AIT 642 Software Testing and Maintenance (3 units) (*)
- 5. AIT 725 Case Studies in Software Engineering* (3 units)

(*) These courses meet in-person. No online sections will be offered.

AIT Elective Courses* (15 units) (electives listed on page 2)

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

AIT-500 Fundamentals of Computer Programming and Data Structures* (6 units) (if necessary will be indicated in admission letter from AIT Program Director and milestone assigned in Student Center)

- AIT 500 Fundamentals of Computer Programming and Data Structures

OR

- AIT 500 Not Necessary

Notes

- *AIT 697 Graduate Internship and AIT Case Study courses require special permission for registration, processes for both are outlined in the AIT M.S. Program site on BlackBoard.
- *All AIT graduate students are allowed one non-AIT elective, subject to the approval of the Program Director; process for approval outlined in the AIT M.S. Program site on BlackBoard.
- *AIT 500 Fundamentals of Computer Programming and Data Structures cannot be counted towards elective requirements.
- Multiple graduate certificates can be earned through the completion of additional Case Study courses; Case studies do NOT count as elective courses.

- Awarding of AIT MS and graduate certificate degrees also subject to additional graduation requirements, including but not limited to: Overall GPA of 3.0, 7-year time limit starting with the first course used to fulfil degree requirements, no more than two 500-level courses; See Graduate Catalog for complete details (catalog.towson.edu/graduate)

Applied Information Technology Electives

- AIT 612 Information Systems Vulnerability and Risk Analysis (3 units)
- AIT 613 Introduction to Software Security (3 units)
- AIT 614 Network Security (3 units)
- AIT 616 Fundamentals of Web Technologies and Development (3 units)
- AIT 618 Client/Server-side programming on the Web (3 units)
- AIT 620 Business Data Communications (3 units)
- AIT 622 Networks Architecture and Protocols (3 units)
- AIT 628 Information Technology Infrastructure (3 units)
- AIT 630 Information Technology Project Management (3 units)
- AIT 632 Database Management Systems (3 units)
- AIT 641 Software Requirements Engineering (3 units)
- AIT 642 Software Testing and Maintenance (3 units)
- AIT 644 Health Information Technology (3 units)
- AIT 645 Healthcare Data Analytics (3 units)
- AIT 650 Computer & Networks Forensics and Incident Response (3 units)
- AIT 652 Ethics, Law, and Policy in Cyberspace (3 units)
- AIT 655 Managing Information Security (3 units)
- AIT 660 Mobile Device Forensics (3 units)
- AIT 665 Cloud Computing (3 units)
- AIT 670 Special Topics in Applied Information Technology (3 units)
- AIT 697 Graduate Internship** (3 units)
- AIT 732 Advanced Database Management Systems (3 units)

Recommendations

- Recommended electives for SWEN are: AIT 612, AIT 613, AIT 620, AIT 622, AIT 628, AIT 632
- Suggested/Popular non-AIT electives include: COSC 757, COSC 760, PRWR 621, PRWR 623