AIT 690: Theory and Models for Cyber Situational Awareness – Spring 2019

DAY, TIME
Thursday, 1:30 PM – 4:10 PM

INSTRUCTOR INFORMATION
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Office Hours: By appointment

DESCRIPTION AND LEARNING OBJECTIVES
Today, when a security incident happens, the top three questions a cyber operation center would ask are: What has happened? Why did it happen? What should I do? Answers to the first two questions form the core of cyber situation awareness (SA). Whether the last question can be satisfactorily addressed is largely dependent on the cyber SA capability of an enterprise. This course will cover mathematical models, scalable methods, and automated tools that attempt to efficiently answer the first two questions.

PREREQUISITES
Enrollment in the VSE PhD program, Permission of Instructor.

READING MATERIAL
The course will cover several research articles including articles from the books:


STUDENT EVALUATION
Term paper – Outline (2-3 pages) due on March 21st; Complete paper due on May 9th
90+ = A; 80-89 = B; 70-79 = C; 60-69 = D; below 60 = F.

ADDITIONAL INFORMATION
- Students are permitted to interact on homework assignments, but your write-up must be your own.
- Religious observances are one common example of events that might impact students’ activities. Students are responsible for planning ahead. Please, refer to the GMU’s calendar of religious holidays at [http://ulife.gmu.edu/religious_calendar.php](http://ulife.gmu.edu/religious_calendar.php).
• Academic Policy: All academic policies as given in the Honor System and code will be strictly followed. These are available at http://catalog.gmu.edu/content.php?catoid=19&navoid=4113.

• General Policies: All general policies defined in the University Catalog are in place for this course. You can access those at http://catalog.gmu.edu/content.php?catoid=19&navoid=4114.

• George Mason University is an Honor Code university. Please see the Office of Academic Integrity website http://oai.gmu.edu/the-mason-honor-code-2/ for a full description of the honor code and the honor committee process. All members of the Mason community are expected to uphold the principles of scholarly ethics. Similarly, graduating students are bound by the ethical requirements of the professional communities they join. On admission to George Mason University, students agree to comply with the requirements of the Mason Honor System and Code. The Honor Code will be strictly enforced in this course. Honor Code cases are heard by a panel consisting of students – students who meet the requirements are encouraged to nominate themselves to serve on the Honor Committee.

• Any use of the words or ideas of another person(s), without explicit attribution that clearly identifies the material used and its source in an appropriate manner, is plagiarism and will not be tolerated. The Instructor reserves the right to use manual and/or automated means (including such services as SafeAssign.com) to detect plagiarism in any work submitted by students for this course, and to direct Teaching Assistants and/or other faculty and/or staff members to do likewise in support of this course.

• Students with a documented learning disability or other condition that may affect academic performance should: (i) make sure this documentation is on file with Office of Disability Services (SUB I, Rm. 4205; 993-2474) to determine the accommodations they need; and (ii) talk with the instructor to discuss their accommodation needs. The Office of Disability Services (ODS) works with disabled students to arrange for appropriate accommodations to ensure equal access to university services. Any student with a disability of any kind is strongly encouraged to register with ODS as soon as possible and take advantage of the services offered. Accommodations for disabled students must be made in advance – ODS cannot assist students retroactively, and at least one week's notice is required for special accommodations related to exams. Any student who needs accommodation should contact the Instructor during the first week of the semester so the sufficient time is allowed to make arrangements.