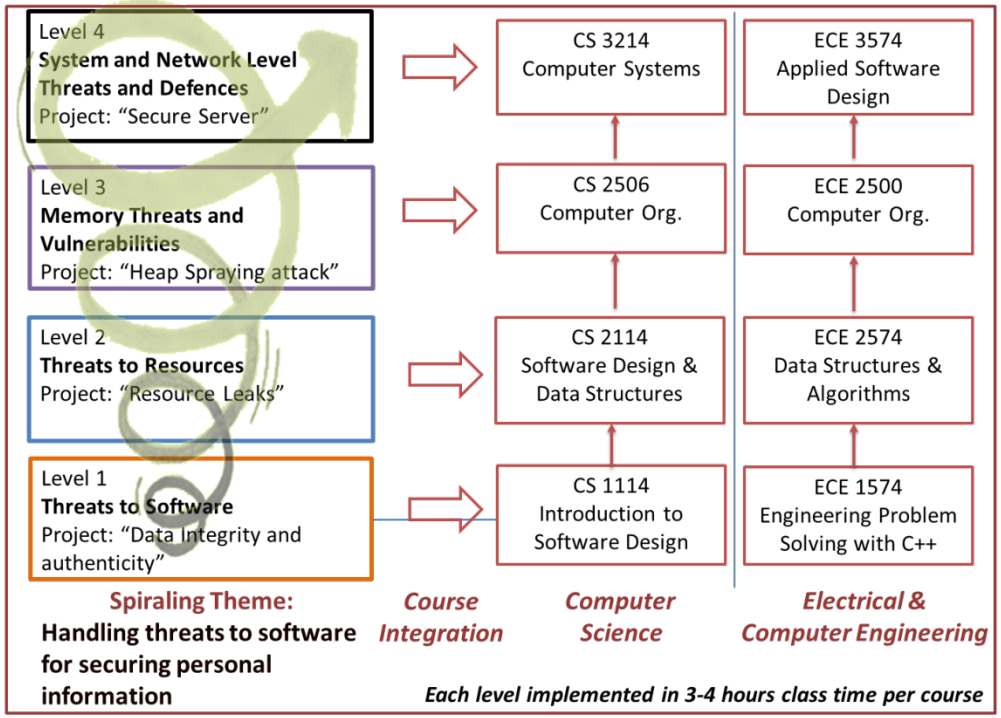
Development and Analysis of a Spiral Theory-based Cybersecurity Curriculum



Challenge:

Enhance cybersecurity learning experiences of students at Virginia Tech's large engineering program

Scientific Impact:

- Research findings regarding how students learn and get motivated about cybersecurity concept
- Curriculum development/implementation experiences to infuse cybersecurity into a large engineering program

Broader Impact:

- Enhance recruitment of informed undergraduates into the CyberCorps and VT-Scholarship for Service program at VT
- Increase the number of graduates who accept employment in the cybersecurity field or pursue graduate studies in cybersecurity
- An education theory based curriculum model for cybersecurity education

Solution:

- Development and implementation of a unique curriculum delivery model in cybersecurity into Computer Science and Computer Engineering curricula using Jerome Bruner's spiral curriculum theory
- Engineering education research to evaluate students' learning experiences

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