

Description of Courses

SST501 Introduction to Defense Science and Technology

3:0:3

This course teaches the basic knowledge related to the defense science and technology that students in the field of security S&T should understand, so that they can acquire the grounding needed to build expertise in the field of defense and security in the future.

SST502 AI for Defense and Security

3:0:3

This course will address AI technologies relevant to national security and defense. This course is suitable for graduate students in engineering or physics with an interest in examining the relationship of their discipline to national security, defense, and intelligence. Successful completion of the course will allow students to knowledgeably discuss the relationship of AI technology development to strategic competitiveness and emerging issues in national defense policy.

SST503 Robotics for Defense and Security

3:0:3

This course offers an overview of how robotics is applied in defense and security applications. It covers the fundamental concepts of robotics, their contributions to diverse defense and security missions, and the ethical and legal aspects that govern their utilization. Students will learn about current technologies, technical obstacles, and future perspectives associated with robot applications in the defense and security domains.

SST511 Advanced Defense Energy & Materials

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In this course, students learn advanced energy and material technologies that can be applied to advanced weapon systems for national defense.

- Advanced Defense Energy Technology focuses on application technologies of the energy & propulsion system for Ground, Maritime/Underwater, and Aerial Vehicles.
- Advance Defense Material Technology focuses on learning expertise on ceramics, alloy metal, and carbon composite materials that are actually used in weapon systems.
- The above class will be conducted through the process of 'transferring the experience of practical researchers and developers'and 'field learning'.

SST512 Quantum Information technology and future security-national defense

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This course provides a brief overview of quantum information theory and basics of quantum mechanics. Applications of quantum computing, quantum communication, and quantum sensing to national defense and their underlying technologies will be introduced.

SST960 M.S. Thesis Research

In this course, students conduct creative and in-depth research under the guidance of an academic advisor as part of the requirements for the master's degree.

SST980 Ph.D. Thesis Research

In this course, students conduct creative and in-depth research under the guidance of an academic advisor as part of the requirements for the master's degree.

SST965 M.S. Individual Study

In this course, students conduct creative and in-depth research under the guidance of an academic advisor.

SST985 Ph.D. Individual Study

In this course, students conduct creative and in-depth research under the guidance of an academic advisor.

SST966 M.S. Seminar**1:0:1**

This seminar course provides students with the opportunity to learn about the national security theory, the role of science and technology through war history, and science and technology required for future security and defense from experts both on and off campus. With this course, students can get help in identifying innovative research topics in the field of security and defense.

SST986 Ph.D. Seminar**1:0:1**

This seminar course provides students with the opportunity to learn about the national security theory, the role of science and technology through war history, and science and technology required for future security and defense from experts both on and off campus. With this course, students can get help in identifying innovative research topics in the field of security and defense.