



General Portfolio of Shayan Taheri's Teaching Plan at Gannon University

In the following, the general portfolio of Dr. Shayan (Sean) Taheri's planned courses to teach in the Department of Electrical and Computer Engineering (ECE) at the Gannon University (GU) is presented in three major tracks:

Computer Architecture Track:

- Introduction to Programming – Python and MATLAB ([Textbook \(TB\) 1](#) and [Textbook 2](#)).
- Digital Systems ([Textbook](#)).
- Embedded Systems ([Textbook 1](#), [Textbook 2](#), and [Textbook 3](#)).
- Hardware Description Languages ([Textbook 1](#), [Textbook 2](#), and [Textbook 3](#)).
- Computer System and Software ([Textbook](#)). Every Fall Semester.
- Advanced Computer Architecture ([Textbook](#)). Every Spring Semester.
- Parallel Computer Architecture ([Textbook 1](#), [Textbook 2](#), [Textbook 3](#), and [Textbook 4](#)).

VLSI Track:

- Introduction to VLSI Design ([Textbook](#)).
- VLSI Testing and Verification ([Textbook](#)). Every Fall Semester.
- Advanced VLSI Design ([Textbook](#)). Every Spring Semester. Inclusion of ASIC-based Laboratory Assignments and Full Custom-based Projects.
- VLSI Physical Design Automation ([Textbook](#)).
- Mixed-Signal VLSI Design ([Textbook 1](#) and [Textbook 2](#)).

Cybersecurity Track:

- Hardware Security ([TB 1](#), [TB 2](#), and [TB 3](#)). Development in the GU ECE Department.
- Advanced Hardware Security ([TB 1](#), [TB 2](#), and [TB 3](#)). Development in the GU ECE Department.
- Introduction to Security Aspects of Artificial Intelligence ([TB 1](#), [TB 2](#), [TB 3](#), and [TB 4](#)). Development in the GU ECE Department.