

# Computer Engineering Course List

## Core Computer Engineering Courses: Computer Engineering

- 713 High-Speed Digital Circuit Design
- 743 Advanced Computer Architecture
- 746 Database Systems
- 750 Advanced Operating Systems
- 762 Programming Language Foundation I
- 780 Communication Networks
- 786 Digital VLSI

## Elective Courses: Computer Engineering

- 628 Fiber Optic Communication Systems
- 638 Fundamentals of Expert Systems
- 649 Intro Artificial Intelligence
- 664 Intro Digital Communication Systems
- 670 Semiconductor Processing
- 672 Intro Computer Graphics
- 718 Graph Algorithms
- 730 Introduction to Bioinformatics
- 731 Introduction to Data Science
- 738 Machine Learning
- 739 Scientific Parallel Computing
- 740 Digital Image Processing
- 741 Computer Vision
- 742 Static Analysis
- 744 Communications and Radar Digital Signal Processing
- 745 Implementation of Networks
- 753 Embedded and Real Time Computer Systems
- 759 Estimation and Control of Unmanned Autonomous Systems
- 764 Analysis of Algorithms
- 765 Introduction to Cryptography and Computer Security
- 767 Information Retrieval
- 768 Virtual Machines
- 769 Information Theory
- 773 Advanced Graphics
- 774 Geometric Modeling
- 775 Visualization

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| 776 | Functional Programming and Domain Specific Languages |
| 781 | Numerical Analysis I                                 |
| 782 | Numerical Analysis II                                |
| 784 | Science of Communication Networks                    |
| 788 | Analog Integrated Circuit Design                     |
| 828 | Advanced Fiber-Optic Communications                  |
| 830 | Advanced Artificial Intelligence                     |
| 837 | Data Mining  |
| 839 | Mining Special Data                                  |
| 843 | Programming Language Foundation II                   |
| 844 | Adaptive Signal Processing                           |
| 861 | Random Signals and Noise                             |
| 862 | Principles of Digital Communication Systems          |
| 863 | Network Analysis, Simulation, and Measurements       |
| 865 | Wireless Communication Systems                       |
| 866 | Network Security                                     |
| 868 | Mathematical Optimization with Applications          |
| 881 | High-Performance Networking                          |
| 882 | Mobile Wireless Networking                           |
| 888 | Internet Routing Architectures                       |
| 965 | Detection and Estimation Theory                      |
| 983 | Resilient and Survivable Networking                  |