

Course Catalog - Spring 2006

Computational Science and Engineering

400 **Data Structures, Non-CS Majors** Credit: 4 hours.
Same as CS 400. See CS 400.

401 **Intro to Numerical Analysis** Credit: 3 or 4 hours.
Same as CS 450, ECE 491, and MATH 450. See CS 450.

402 **Intro to Parallel Programming** Credit: 3 or 4 hours.
Same as CS 420 and ECE 492. See CS 420.

411 **Numerical Methods for PDEs** Credit: 3 or 4 hours.
Same as CS 455 and MATH 455. See CS 455.

412 **Numerical Linear Algebra** Credit: 3 or 4 hours.
Same as CS 458, and MATH 458. See CS 458.

413 **Numerical Approx and ODEs** Credit: 3 or 4 hours.
Same as CS 459 and MATH 459. See CS 459.

414 **Algorithms** Credit: 3 or 4 hours.
Same as CS 473 and MATH 473. See CS 473.

422 **Computer System Organization** Credit: 3 or 4 hours.
Same as CS 433. See CS 433.

423 **Operating Systems Design** Credit: 3 or 4 hours.
Same as CS 423. See CS 423.

424 **Distributed Systems** Credit: 3 hours.
Same as CS 425, and ECE 428. See CS 425.

425 **Communication Networks** Credit: 3 hours.
Same as CS 438, and ECE 438. See CS 438.

426 **Software Engineering, I** Credit: 3 or 4 hours.
Same as CS 427. See CS 427.
This course satisfies the General Education Criteria for aAdvanced Composition course.

427 **Computer Graphics** Credit: 3 or 4 hours.
Same as CS 418. See CS 418.

428 **Advanced Comp Graphics** Credit: 3 or 4 hours.
Same as CS 419. See CS 419.

429 **Software Engineering, II** Credit: 3 or 4 hours.
Same as CS 428. See CS 428.
This course satisfies the General Education Criteria for aAdvanced Composition course.

433 **Intro VLSI System Design** Credit: 3 hours.

Same as CS 435 and ECE 425. See ECE 425.

441 **Introduction to Optimization** Credit: 3 or 4 hours.
Same as ECE 490. See ECE 490.

450 **Computational Mechanics** Credit: 3 or 4 hours.
Same as TAM 470. See TAM 470.

451 **Intro to Finite Element Anlys** Credit: 3 or 4 hours.
Same as AE 420 and ME 471. See ME 471.

461 **Computational Aerodynamics** Credit: 3 or 4 hours.
Same as AE 410. See AE 410.

462 **Safety Anlys Nucl Reactor Sys** Credit: 3 or 4 hours.
Same as NPRE 457. See NPRE 457.

472 **Phys and Soc Sci Simulation** Credit: 3 hours.
Same as ECON 474 and MSE 482. See MSE 482.

485 **Atomic Scale Simulations** Credit: 3 or 4 hours.
Same as MSE 485 and PHYS 466. See MSE 485.

491 **Computer Methods** Credit: 3 or 4 hours.
Same as CEE 490. See CEE 490.

511 **Iterative & Multigrid Solvrs** Credit: 4 hours.
Same as CS 550. See CS 550.

512 **Parallel Numerical Algorithms** Credit: 4 hours.
Same as CS 554. See CS 554.

513 **Topics in Numerical Analysis** Credit: 4 hours.
Same as CS 558. See CS 558.

514 **Mesh Generation** Credit: 4 hours.
Same as CS 570. See CS 570.

515 **Topics in Algorithms** Credit: 4 hours.
Same as CS 573. See CS 573.

517 **Adv Finite Element Methods** Credit: 4 hours.
Same as TAM 574. See TAM 574.

521 **Computer Architecture** Credit: 4 hours.
Same as ECE 511. See ECE 511.

522 **Parallel Computer Architecture** Credit: 4 hours.
Same as CS 533 and ECE 533. See CS 533.

523 **Advanced Operating Systems** Credit: 4 hours.
Same as CS 523. See CS 523.

- 524 **Computer Systems Analysis** Credit: 4 hours.
Same as CS 541 and ECE 541. See CS 541.
- 526 **Adv Topics in Compiler Constr** Credit: 4 hours.
Same as CS 526. See CS 526.
- 527 **Scientific Visualization** Credit: 4 hours.
Same as CS 519. See CS 519.
- 528 **Computer Microarchitecture** Credit: 4 hours.
Same as ECE 512. See ECE 512.
- 529 **Adv Topics in Software Eng** Credit: 4 hours.
Same as CS 527. See CS 527.
- 530 **Computational Electromagnetics** Credit: 4 hours.
Same as ECE 540. See ECE 540.
- 532 **Numerical Circuit Analysis** Credit: 4 hours.
Same as ECE 552. See ECE 552.
- 534 **Adv Theory Semicond & Devices** Credit: 4 hours.
Same as ECE 539. See ECE 539.
- 542 **Digital Signal Processing II** Credit: 4 hours.
Same as ECE 551. See ECE 551.
- 543 **Topics in Image Processing** Credit: 4 hours.
Same as ECE 547. See ECE 547.
- 544 **Power System Dyn & Stability** Credit: 4 hours.
Same as ECE 576. See ECE 576.
- 545 **Power System Control** Credit: 4 hours.
Same as ECE 573. See ECE 573.
- 551 **Finite Element Methods** Credit: 4 hours.
Same as CEE 570. See CEE 570.
- 560 **Computational Fluid Mechanics** Credit: 4 hours.
Same as TAM 570. See TAM 570.
- 561 **Computational Process Modeling** Credit: 4 hours.
Same as ME 554. See ME 554.
- 564 **Surface Water Quality Modeling** Credit: 4 hours.
Same as CEE 534. See CEE 534.
- 565 **Groundwater Modeling** Credit: 4 hours.
Same as CEE 557. See CEE 557.
- 566 **Numerical Fluid Dynamics** Credit: 4 hours.
Same as ATMS 502 and CS 505. See ATMS 502.

567 ***Dynamical Weather Prediction*** Credit: 4 hours.
Same as ATMS 503. See ATMS 503.

568 ***Global Atmospheric Modeling*** Credit: 4 hours.
Same as ATMS 530. See ATMS 530.