

Course Catalog - Fall 2008

Computational Science and Engineering

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

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

402 **Parallel Progrmg: Sci & Engrg** 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.

414 **Algorithms** credit: 0 to 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 a Advanced Composition course.

427 **Interactive Computer Graphics** credit: 0 to 4 hours.
Same as CS 418. See CS 418.

428 **Production Computer 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 a Advanced Composition course.

433 **Intro to 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 **Finite Element Analysis** 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 Anlysis Nucl Reactor Syst** credit: 3 or 4 hours.
Same as NPRE 457. See NPRE 457.

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.

510 **Numerical Methods for PDEs** credit: 4 hours.
Same as CS 555 and MATH 552. See CS 555.

- 511 ***Iterative & Multigrid Methods*** credit: 4 hours.
Same as CS 556. See CS 556.
- 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 ECE 541.
- 526 ***Advanced Compiler Construction*** 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 **Topics in Software Engineering** 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.

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