



Help Desk: 204 Daniels Hall
Email: eoshelp@ncsu.edu
<http://www.eos.ncsu.edu>
919-515-2458

College of Engineering
<http://www.engr.ncsu.edu>

Links to Computing Information

SOC: <http://www.eos.ncsu.edu/soc>
E115: <http://www.eos.ncsu.edu/e115>
E101: <http://courses.ncsu.edu/e101>
Labs: <http://www.eos.ncsu.edu/labs>
Software: <http://www.eos.ncsu.edu/software>
Remote Access:
<http://www.eos.ncsu.edu/remotearchive>
VCL: <http://vcl.ncsu.edu>
Webmail: <http://webmail.ncsu.edu>
Antivirus: <http://www.ncsu.edu/antivirus>
NCSU Help Desk: <http://help.ncsu.edu>
Accessibility: <http://www.ncsu.edu/it/access>

**Guide to Eos and Unity
Computing**, by Dr. Ellen McDaniel
<http://www.eos.ncsu.edu/guide/>
and in the NCSU Bookstore

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ENGINEERING STUDENT COMPUTING

INFORMATION TECHNOLOGY & ENGINEERING COMPUTER SERVICES (ITECS)
COLLEGE OF ENGINEERING
NORTH CAROLINA STATE UNIVERSITY

WHAT IS EOS?

Eos is the common computing environment that the College of Engineering shares across its departments and curricula. Named in 1991 for the Greek goddess of the dawn, *Eos* was originally built on technologies developed in MIT's Athena Project and Carnegie Mellon University's Project Andrew. Today, *Eos* is part of an expanded project called *Unity* that serves all of NCSU. The rich resources of *Eos* and *Unity* together have brought recognition to the university and the college. *Forbes.com* and *The Princeton Review* in 2006 named NCSU one of "America's Most Connected Campuses" for its "cutting-edge technology."

STUDENT-OWNED COMPUTING (SOC)

All incoming undergraduate engineering students are expected to have a laptop or tablet computer that meets college specifications. The college has adopted an open platform model so that students can choose the hardware vendor they prefer. Special prices for laptops have been arranged with Lenovo and Apple and are available for purchase at the NCSU Bookstores by any NC State student, faculty or staff. More information about laptop purchases and support of student-owned computing can be found at <http://www.eos.ncsu.edu/soc/>.

E115 AND EOS

From its beginning, *Eos* has been taught to freshmen in *E115: Introduction to Computing Environments*. *Eos* was first taught on UNIX workstations in the 1990s, on Linux lab computers since 2000, and on laptops in the student-owned computing pilot program, 2001-05. Since 2006, *E115* has been taught to all engineering freshmen on their own student-owned laptops running their choice of a current operating system, Linux, Mac, or Windows. *E115* prepares students for engineering computing and gives them hands-on experience in the maintenance and effective use of their own computers to interface with *Eos* resources (<http://www.eos.ncsu.edu/e115/>).

EOS LABS

Eos has always been heavily lab-based in order to expose students to industry-standard applications that may not be available on individually owned computers. Labs also provide high-end hardware and peripherals, shared printing, operator assistance, and an environment in which collaboration on computing projects is encouraged.

The college has 17 Eos labs and laboratories running software for Microsoft Windows, Sun Solaris, and Red Hat Linux. Students from all engineering departments can use these labs (<http://www.eos.ncsu.edu/labs/>).

REMOTE ACCESS AND VCL

Among the specialized services that the college has developed is the Virtual Computing Lab (VCL, <http://vcl.ncsu.edu>). VCL is a new type of lab that is available via remote access to students working in labs, at home, or wirelessly on their personal laptops. It was designed to address the needs of both local and distance students and faculty, who require 24/7 access to Eos applications, file storage, and services. Through VCL, users connect to Windows, Solaris, or Linux computers and run the applications they need remotely. VCL is an ongoing and joint project of the College of Engineering and NC State's High-Performance Computing facility.

EOS SOFTWARE

Eos has an unparalleled library of engineering software, available both in labs and via remote access. When the license permits, applications can also be installed on student computers, see <http://www.eos.ncsu.edu/soc/software/>. Eos runs AFS, a location-independent file system that delivers these applications to users. AFS also provides user file storage with nightly backup so that students can always get to their files. A selected list of software appears at the right. The full application catalog is at <http://www.eos.ncsu.edu/software/>.

Selected Licensed Software on Eos	Windows	Solaris	Linux	Mac
ABAQUS (Dassault Systemes)	√		√	
Acrobat Professional (Adobe)	√			√
ADAMS Mechanical System Simulation (MSC)	√	√		
ANSYS Finite Element Analysis (ANSYS)	√		√	
ArcGIS, ArcInfo and ArcView (ESRI)	√	√		
ARENA Simulation (Rockwell)	√			
AspenONE Engineering Suite (Aspen)	√			
AutoCAD Computer-Aided Design (Autodesk)	√			
AVR Studio Microcontroller Dev. (Atmel)	√			
Cadence Circuit Design/Simulation (Cadence)		√	√	
Compilers (C++, Java, Perl, Php, Python, Tcl)	√	√	√	√
COMSOL Multiphysics (COMSOL)	√			√
COSMOS Design Analysis (SolidWorks)	√			
CPLEX Optimization Modeling (ILOG)	√	√	√	
Creative Suite (Adobe)	√			√
Eclipse (Eclipse Foundation)	√		√	
Fortran 90 and 95 NAGware Compilers (NAG)	√	√	√	√
Framemaker Multi-Channel Publisher (Adobe)	√	√		
Java Development Kit (Sun)	√	√	√	
JMP Statistical Visualization (SAS)	√			√
LabVIEW (National Instruments)	√			
Lindo Optimization, Lingo Modeling (LINDO)	√	√	√	
Maple Symbolic Mathematics (Maplesoft)	√	√	√	√
Mathcad Calculation Environment (PTC)	√			
Mathematica Symbolic Mathematics (Wolfram)	√	√	√	√
MathType Equation Editor (Design Science)	√			√
Matlab Computation & Toolboxes (Mathworks)	√	√	√	√
Microstation with Geopak (Bentley)	√			
Moldflow Plastics Advisors (Moldflow)	√			
NEEx Engineering Spreadsheet (GreyTrout)		√	√	
Microsoft Office: Excel, Powerpoint, Word + Access, Project, Visio	√			Office
OPLStudio (ILOG)	√	√	√	
OPNET Network Modeler (OPNET)	√	√	√	
Primavera Project Planner (Primavera)	√			
Pro/Engineer Wildfire CAD (PTC)	√	√	√	
RSLogix Logic Programming (Rockwell)	√			
SAS Data Analysis Applications (SAS)	√	√	√	√
Silvaco Integrated Circuit Design (Silvaco)		√	√	
SlickEdit Editor (SlickEdit)	√	√	√	√
SmalltalkVisualAge (IBM)	√	√		
SolidWorks CAD (SolidWorks)	√			
StarOffice Office Applications (Sun)	√	√	√	
SuperPro Designer (Intelligen)	√			
SurfCAM Velocity II (Surfware)	√			
Synopsys University Tool Package (Synopsys)		√	√	
Tecplot Interactive Plotting (Tecplot)	√	√	√	√
Timberline Estimating (Sage)	√			
TK Solver Equation Solver (UTS)	√			
Visual Modflow Pro (Waterloo Hydrogeologic)	√			
Visual Studio .NET (Microsoft)	√			
WaterCAD GIS (Bentley)	√			
WinEdt (WinEdt)	√			
*X-Win32 X Windows App Server (StarNet)	√			

*All Solaris and Linux applications can be run from the Windows platform via X-Win32