



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

### **Guide to Eos and Unity Computing**

by Dr. Ellen McDaniel  
<http://www.eos.ncsu.edu/guide/>  
and in the NCSU Bookstore

### **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>  
VCL: <http://vcl.ncsu.edu>,  
<http://www.eos.ncsu.edu/remotearchive>  
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>

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

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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 1990 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 resources of *Eos* and *Unity* together undergird a technology-rich environment for student learning and research.

## **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, Dell 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 for 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 taught on UNIX workstations in the 1990s, and on Linux lab computers and laptops in the student-owned computing pilot program, 2001-05. Since 2006, *E115* has been taught to all engineering freshmen on their own laptops running their choice of a current Linux, Mac or Windows operating system. *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 college and campus resources, see <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 cannot be licensed for or run effectively on student-owned computers. Labs also provide high-end hardware and peripherals, operator assistance,

shared printing, and an environment in which collaboration on computing projects is encouraged.

The college has 18 Eos labs and laboratories running software for Microsoft Windows, Sun Solaris and Red Hat Linux. Students from all engineering departments can use Eos labs, <http://www.eos.ncsu.edu/labs>.

## REMOTE ACCESS AND VCL

Among the specialized services that ITECS has developed for students is the Virtual Computing Lab (VCL) at <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 software, file storage and services. Through VCL, users connect to Windows, Solaris or Linux computers to run the applications they need remotely. VCL is now an ongoing joint project of the College of Engineering and NCSU's Office of Information Technology (OIT).

## EOS SOFTWARE

Eos has an unparalleled library of engineering software, available both in labs and via remote access. When the license permits, applications can be installed on student computers, see <http://www.eos.ncsu.edu/soc>. Eos runs both Microsoft Active Directory and the Andrew File System (AFS) to deliver these applications and to provide user file storage with nightly backup. A selected list of software appears at the right. The complete application catalog is on the web at <http://www.eos.ncsu.edu/software>.

Selected Licensed Software on Eos	Windows	Solaris	Linux	Mac	VCL
ABAQUS (Dassault Systemes)	√		√		√
ADAMS Mechanical Simulation (MSC)	√	√	√		√
Adobe Acrobat Professional, Contribute, Creative Suite (CS), Dreamweaver, Flash, Illustrator, InDesign, Photoshop	√			√	
ANSYS (ANSYS)	√		√		√
ArcGIS Desktop (ESRI)	√				
ArcInfo Workstation (ESRI)	√	√			√
ARENA Simulation (Rockwell)	√				√
AspenONE Engineering Suite (Aspen)	√				√
AutoCAD & Civil 3D Design (Autodesk)	√				√
AVR Studio (Atmel)	√				
Cadence Circuit Design (Cadence)		√	√		
COMSOL Multiphysics (COMSOL)	√				√
Eclipse Application Dev (Eclipse Foundation)	√	√	√		√
Fortran 90 & 95 NAGware Compilers (NAG)	√	√	√	√	√
ILOG CPLEX Math Programming Optimizer	√	√	√		√
ILOG OPL Development Studio (ILOG)	√	√	√		√
Java Development Kit (Sun)	√	√	√		√
JMP Statistical Visualization (SAS)	√		√	√	√
LabVIEW (National Instruments)	√			√	
Lindo Optimization, Lingo Modeling (LINDO)	√				√
Maple Symbolic Mathematics (Maplesoft)	√	√	√	√	√
Mathcad Engineering Calculation (PTC)	√				√
Mathematica Computation (Wolfram)	√	√	√	√	√
MathType Equation Editor (Design Science)	√			√	
Matlab Computation & Toolboxes (Mathworks)	√	√	√	√	√
Microsoft Access, Excel, Office, Powerpoint, Project, Visio, Visual Studio .NET, Word	√				√
Microstation with Geopak (Bentley)	√				
Moldflow Plastics Advisors (Autodesk)	√				
NExS Engineering Spreadsheet (GreyTrout)		√	√		√
OfficeScan Antivirus (Trend Micro)	√				
OpenOffice Office Suite (OpenOffice.org)		√	√		√
OPNET Network Modeler (OPNET)	√		√		√
Primavera Project PPM (Oracle)	√				√
Pro/Engineer Wildfire CAD (PTC)	√	√	√		√
Python (Python Software Foundation)	√				
RSLogix Logic Programming (Rockwell)	√				√
SAS Data Analysis Applications (SAS)	√	√	√	√	√
SlickEdit Editor (SlickEdit)	√	√	√	√	√
SolidWorks CAD (SolidWorks)	√				√
SuperPro Designer Process Model.(Intelligen)	√				√
SurfCAM Velocity CNC Program. (Surfware)	√				
Synopsys University Tool Pkg (Synopsys)		√	√		√
Tecplot Interactive Plotting (Tecplot)	√	√	√	√	√
Timberline Office Estimating (Sage)	√				√
TK Solver Math Modeling (UTS)	√				
VirusBarrier Antivirus (Intego)				√	
Visual Modflow Pro (Schlumberger )	√				
WaterCAD GIS (Bentley)	√				
WinEdt Document Editor (WinEdt)	√				
*X-Win32 X Windows App Server (StarNet)	√				

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