



**Help Desks: 204 Daniels Hall  
1002 Engineering Building I  
Email: [eoshelp@ncsu.edu](mailto:eoshelp@ncsu.edu)  
<https://www.eos.ncsu.edu>  
919-515-2458**

### **Links to Computing Information**

SOC: <https://www.eos.ncsu.edu/soc>  
E115: <https://www.eos.ncsu.edu/e115>  
Labs: <https://www.eos.ncsu.edu/labs>  
Software: <https://www.eos.ncsu.edu/software>  
<https://download.eos.ncsu.edu>  
VCL: <https://vcl.ncsu.edu>  
Help Desk: <https://www.eos.ncsu.edu/help>  
Webmail: <https://gmail.ncsu.edu>  
Accessibility: <https://oit.ncsu.edu/itaccess>

### **ITECS Staff**

Thomas K. Miller, Assoc. Dean  
Keith Boswell, Director  
Charles Hunt, Help Desk Manager

Mitch Amiano  
Michelle Bailey  
Tony Baumann  
Billy Beaudoin  
Erik Britt  
Jeremy Brown  
Audrey Bryson  
Gary Gatling  
Margaret Hudacko  
Robbie Little  
Ellen McDaniel  
Andrew Senn  
Joshua Snapp  
Emily Stamey  
Joe Stiles  
Dustin Wheeler

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

**Spring 2016**

# **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 provide 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 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 <https://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, then on Red Hat Linux lab computers, 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 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 IT resources, see <https://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, and an environment in which collaboration on computing projects is encouraged.

The college's Eos labs and collaboration spaces run software for Microsoft Windows and Red Hat Linux. Students from all engineering departments can use the Eos labs, <https://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 <https://vcl.ncsu.edu>. VCL 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 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. Eos runs Microsoft Active Directory and the Andrew File System (AFS) to deliver these applications, as well as provide user file storage with nightly backup.

A selected list of engineering software applications appears at the right. When the vendor license permits, applications can also be downloaded to individually owned computers from <https://download.eos.ncsu.edu>.

The full catalog can be found at <https://www.eos.ncsu.edu/software>.

Selected Licensed Software on Eos	Windows	Linux	Mac	VCL
Adams/Machinery (MSC)	✓			
Adobe Acrobat XI Professional	✓		✓	
Anaconda Python (Continuum Analytics)	✓	✓	✓	
ANSYS Finite Element Analysis (ANSYS)	✓	✓		✓
ArcGIS Desktop (ESRI)	✓			✓
ARENA Simulation (Rockwell)	✓			✓
AspenONE Engineering Suite (Aspen)	✓			✓
Atmel Studio (Atmel)	✓			
AutoCAD (Autodesk)	✓		✓	
AutoCAD Civil 3D Design (Autodesk)	✓			✓
COMSOL Multiphysics (COMSOL)	✓			✓
Creo, formerly Pro/Engineer Wildfire (PTC)	✓			✓
Eclipse Application Dev (Eclipse Foundation)	✓	✓		✓
Fortran 95 NAGware Compiler (NAG)	✓	✓	✓	✓
GMS Groundwater Modeling (Aquaveo)	✓			
ILOG CPLEX Optimization Studio (IBM)	✓	✓		✓
Java Development Kit (Sun)	✓	✓		✓
jGRASP Development Environment (Auburn)		✓		✓
JMP Statistical Visualization (SAS)	✓		✓	✓
Kaspersky Antivirus	✓		✓	
LabVIEW (National Instruments)	✓	✓	✓	✓
LibreOffice (Document Foundation)		✓		✓
Lindo Optimization, Lingo Modeling (LINDO)	✓			✓
Maple Symbolic Mathematics (Maplesoft)	✓	✓	✓	✓
Mathcad Prime (PTC)	✓			✓
Mathematica Computation (Wolfram)	✓	✓	✓	✓
MathType Equation Editor (Design Science)	✓		✓	
Matlab Computation & Toolboxes (Mathworks)	✓	✓	✓	✓
Microsoft Access, Excel, Office, Powerpoint, Project, Visio, Word	✓			
Microstation with Geopak (Bentley)	✓			
Moldflow Simulation Advisor (Autodesk)	✓			
NExS Engineering Spreadsheet (GreyTrout)		✓		✓
Origin Graphing & Analysis (OriginLab)	✓			✓
PuTTY Terminal Emulation	✓			
Python (Python Software Foundation)	✓			✓
R Statistical Computing (R Foundation)	✓		✓	
Riverbed Network Modeler (Riverbed)	✓	✓		✓
RSLogix Logic Programming (Rockwell)	✓			✓
SAP2000 Modeling Environment (CSI)	✓			
SAS Data Analysis Applications (SAS)	✓			✓
Simio Object-based 3D Modeling (Simio)		✓		✓
SlickEdit Editor (SlickEdit)	✓	✓		✓
SolidWorks CAD (SolidWorks)	✓			✓
Splint C Programming Security (UVa)		✓		✓
SPSS Statistics and Analytics (IBM)	✓			
Star-CCM+ Simulation (CD-adapco)	✓			
SurfCAM CAD/CAM (Surfware)	✓			
Tecplot Interactive Plotting (Tecplot)	✓	✓	✓	✓
TK Solver Math Modeling (UTS)	✓			
WinEdt Document Editor (WinEdt)	✓			✓
WinSCP SFTP, SCP and FTP Client	✓			
*X-Win32 X Windows App Server (StarNet)	✓			

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