

Appendix B: SACS 3.4.12 List of Commonly Used and Specialized Technology for Enhancement of Student Learning at UNCG

Note: Data was gathered from technology use examples submitted by academic programs, and from the UNCG network-delivered software inventory maintained by ITS. List does not include all software and equipment used for student learning. Information regarding additional high performance computing (HPC) software and resources available through UNCG's partnership with NC State is available at <http://its.uncg.edu/Research/HPC/> .

Commonly Used Technology: Technology use broadly across multiple academic programs, or within a smaller number of programs in courses that enroll a large number of students (e.g., introductory mathematics courses, ISOM 110).	
Product/Resource	Function
Academic Search Premier & Complete	online information source (lit. review research database)
Adobe Acrobat & other PDF creation software (incl PDF Creator, Ghostscript)	create/edit/print/convert documents in PDF format
Adobe Flash/Flash Player	development and viewing of Adobe Flash applications, animation, etc.
Adobe Illustrator	design/editing (graphic design)
Adobe Photoshop/Photoshop Elements	image design/editing/management
audio recording equipment	multimedia & video projects, music projects, speech & audiology work, verbal feedback & information sharing
Blackboard Collaborate	videoconferencing/synchronous online collaboration
Blackboard Learn (assessment features, blogs, discussion forums, wikis, grade center)	learning management system - document repository, course calendar, interactive features, grade book
classroom response systems ('clickers') - Turning Point, iclicker, etc.	real-time classroom engagement & assessment
computer labs	hands-on technology practice and instruction
desktop/laptop computers	activities outside of class, in-class labs, presentations, hands-on activities
digital archival collections	online information source - access digitized materials (periodicals, manuscripts, photographs, etc.)
document cameras/projectors	classroom display of documents
Dropbox	document storage and sharing (online)
ERIC	online information source (lit. review research database - education)

FactFinder (US Census Bureau)	online information source (census data)
headsets (computer/mobile device)	online communication & listening to audio
iPads & other tablets	mobile & web app access, accessing & sharing online information, capturing audio/video, clinical rotations
iSpartan Google Docs (incl Forms)	online communication/collaboration/publishing (incl synchronous document editing, & data collection forms)
iSpartan Google Drive	online document storage and sharing, file synch
iSpartan Google email	email
iSpartan Google Sites	online communication/collaboration/publishing
iSpartan Google+ Hangouts	videoconferencing/synchronous online collaboration/video chat
laptop carts	owned by some academic units to provide laptops for classroom use
license management systems (e.g., KeyServer, FLEXlm/FlexNet)	software use monitoring and license compliance
Mac OS	computer operating system
Maplesoft Maple	numerical computation/visualization
MathWorks Matlab	numerical computation/visualization
microphones (computer)	online communication & audio capture
Microsoft Access	database design/programming/administration
Microsoft Excel	spreadsheet program, basic statistical analysis
Microsoft Photostory	slideshow creation
Microsoft PowerPoint	presentation creation/editing
Microsoft Visio	diagramming/flowcharting/graphics
Microsoft Windows	computer operating system
Microsoft Word	word processing
MOODLE	learning management system (used for some HHS programs)

online dictionaries	online information source (include foreign language)
online periodicals	online information source (journals, magazines, newspapers, etc.)
Pearson MyITLab	online learning & assessment (IT)
Pearson MyMathLab	online learning & assessment (Math & Stats)
Pharos	managed/fee-for-print services
podcasts/iTunes U	video, audio and multi-media information sources
Prezi	presentation creation/editing (online)
QSR Nvivo	qualitative data analysis
Qualtrics	web survey software
QuickTime Pro & Player	video capture/creation & viewing
removable media - e.g., CDs/DVDs, USB	esp used to turn in assignments w large files (e.g., video, audio)
Respondus	assessment tool (integrated with Bb Learn)
RSS feeds	online information source (news feeds)
SafeAssign (thru Blackboard Learn)	plagiarism prevention & detection
SAS	data/statistical analysis & reporting
scanners and scanning software (e.g., Epson Scan, ABBYY FineReader, SilverFast, Nikon Scan)	document/photo scanning into digital format, OCR
Skype	videoconferencing/synchronous online collaboration/video chat
SMARTboards	interactive (electronic) whiteboard, classroom/lab presentation display
smartphones	mobile & web app access, accessing & sharing online info, capturing audio/video
SPSS	data/statistical analysis & reporting
STATA	data/statistical analysis & reporting
Symantec antivirus	malware protection, detection and removal

Taskstream	e-Portfolio creation and management
textbook websites & interactive learning systems	online information sources/online learning & assessment (e.g., McGraw-Hill, Pearson)
UNCG Library online databases & web resources	online information source, , online workshops, interactive resources (e.g., Information Literacy Game)
various online GIS applications	online information source
video (online/streaming/removable media)	information source (incl Digital Campus)
video projectors	classroom/lab presentation display
video recorders & digital cameras	capturing audio/video & still images
VoiceThread	online communication/collaboration/publishing
web browsers (e.g., Firefox, IE, Chrome)	web browsing/information access
webcams	online communication & video capture
Wikipedia	online information source
Windows Media Player	video and audio media player
WordPress	online communication/collaboration/publishing
YouTube	online communication/collaboration/publishing (video)

Specialized Technology: Technology used within a relatively smaller number of programs, or by a smaller number of students within multiple programs (e.g., specialized/advanced software used in higher-level courses).	
Product/Resource	Function
"bug-in-the-ear" technology	remote/virtual coaching
Adobe After Effects	advanced digital editing - motion, effects
Adobe Flash Builder	software/application development environment
Adobe InDesign	design/editing (print & digital publishing)

AGI32EDU	lighting analysis
AICPA	online information source (accounting)
AMD Catalyst	GPU configuration management (graphics processing unit)
AMOS (from IBM SPSS)	statistical/data analysis - structural equation modeling
anesthesia delivery systems & advanced airway equipment	health professions clinical skills training
Animoto	video/multimedia creation/editing & presentation
antibody staining equipment	antibody staining & visualization
Apache Hadoop (High-availability distributed object-oriented platform)	software used to create cluster computing environments running on "commodity" hardware
Apple iLife, iWork	etc.) and multimedia organization (photos, music, etc.) software
aquatic sampling & measurement equipment (e.g., Sechhi disks)	equipment for drawing samples from & taking measurements from aquatic environments
Archeosurveyor	GIS (geospatial data gathering and management)
assistive technology (e.g., JAWS, Kurzweil 3000, ZoomText)	screen reading, magnification, text to speech, etc.
Atlas.ti	qualitative data analysis
Audacity	audio recording/editing
audit software	auditing information (e.g., accounting)
Auralia	ear training software (music)
AutoDesk software (AutoCAD, max3ds, Revit, etc.)	CAD software
BioEdit	biological sequence alignment editor
BLAST (Basic Local Alignment Search Tool)	analysis of nucleic/protein sequence data
Blender	3D computer graphics creation (e.g., 3D models, effects & animations)
blogging software - e.g., photoblog, weebly, Blogger (avail through iSpartan account)	online communication/collaboration/publishing (incl graphic blogs)
Book Builder	online communication/collaboration/publishing (create, share & read digital books)

Bubbl.us	online communication/collaboration/publishing (mind mapping)
calculators	learning to use graphing calculators for mathematics instruction
Camstudio	screen capture (video/audio)
Camtasia	dynamic screen capture for video/tutorial creation
case simulation software	simulation of operational issues for decision-making exercises (e.g., hotel operations)
CASSY Lab software	data collection (software interface for measurement equipment)
CCH IntelliConnect	online information source (tax, accounting)
Celtex	screenwriting
Census Transportation Planning Package (CTTP)	GIS - transportation planning
Centers for Disease Control (CDC) website	online information source
centrifuges/microcentrifuges	separation of substances of varying densities, typically for further analysis
Centurion/DriveShield	computer data/drive protection and management (ITS labs & some dept labs)
CHARMM software	HPC molecular simulation
ChemDraw	drawing (molecular editor)
ChemSketch	drawing (chemical, molecular structures)
chromatography instruments	chromatography - separation of compounds/mixtures (HPLC, FPLC)
circuits and transistors	system modeling (physics)
Clustal software	analysis of nucleic/protein sequence data (sequence alignment)
CMAP	concept mapping tool
conductivity meters	measurement of electrical conductivity
ContentDM	digital asset management system
coulometers	electric charge measurement

Dedoose	qualitative data analysis
Delicious	online communication/collaboration/publishing (social bookmarking service)
Dept of Homeland Security website	online information source
Dept of State website	online information source
DNA, RNA & protein isolation/purification technology (e.g., Promega's Wizard kit)	isolation/purification of samples
DnaSP	analysis of nucleic/protein sequence data
Dspace	digital asset management system
Edmodo	social networking (designed for educational environments)
Edublog	online communication/collaboration/publishing (blogging for education use)
EEOC	online information source
electromyography	evaluating/recording electrical activity of skeletal muscles
electrophoresis technology (e.g., agarose gel electrophoresis)	study of charged particular movement
Emacs	text editor
EMBL-EBI (European Bioinformatics Institute)	online tools used for cluster & blast analysis
Endnote	citation/reference management software
ENVI+IDL	GIS (processing and analyzing geospatial data)
EPI Info 2008	CDC epidemiological software
E-Prime	experiment design, implementation and analysis
Eraser	data/information protection (secure erasing of files)
Erdas Imagine	GIS (geospatial data creation)
ErrNet	online evaluation of scientific writing/proofreading
ESRI ArcGIS/ArcGIS Server	GIS (includes multiple components + add-on tools - e.g., Geographically Weighted Regression)

ExamSoft	assessment system
Facebook	social networking
FaceTime	videoconferencing/"video calls"/video chat
FASB Account Standards Codification	online information source
Fathom Interactive Statistics	instruction - statistics
fiber optic laryngoscopes	health professions clinical skills training
FileMaker Pro	database software for Macintosh platform
Finale	music notation software
Fluke SmartView	infrared image viewing, editing, annotation and analysis
Folger Shakespeare Library	online information source (incl digital image collection)
GarageBand	music, audio track, and podcast creation
GENBANK	online information source (NIH genetic sequence database)
Genepop	analysis of nucleic/protein sequence data
Genscan	analysis of nucleic/protein sequence data (incl gene location prediction)
Geometry's Sketchpad	instruction - mathematics
glide scopes	health professions clinical skills training
Glogster	online communication/collaboration/publishing (graphic blogs)
GoAnimate	online communication/collaboration/publishing (create & publish animated video)
Google AppInventor	mobile app creation for the Android OS
Google Earth/Google Earth Pro	GIS/online information source (geographical/map information)/3D interactive globe (Pro)
Google Voice	audio calls online
Gpower	Power analysis for study design, statistical analysis

GP-Pari	computer algebra system
GPR devices (ground penetrating radar)	geographical subsurface imaging and data collection
GPS units	location/navigation information and data collection
HEC-RAS (Hydrologic Engineering Centers River Analysis System)	GIS (water flow hydraulics modeling through rivers, etc.)
HLM	data/statistical analysis & reporting (Hierarchical Linear Modeling)
human patient simulators (SimMan)	health professions clinical skills training & assessment
IdentityFinder	data/information protection (detection of protected data such as PII)
iMovie	video/audio creation & editing
incubators	growth of bacteria & fungi
InfraRecorder	CD/DVD burning
International Financial Reporting Standards	online information source
Internet Archive (archive.org)	online information source
IQ-Functional Groups	organic chemistry active learning
IrfanView	image viewing/editing
IRS	online information source
IRT-Pro	data/statistical analysis & reporting (item response theory)
IZArc	file compression/archiving
Jaguar from Schrodinger	HPC computational chemistry, quantum chemistry
Jeol Delta software	NMR spectrometer control/data processing
Jing	screen capture (image/video)
JMP (from SAS)	statistical/data analysis/reporting
Kidblog	online communication/collaboration/publishing (blogging for K-12 education use)

Koha	integrated library system (open source)
KompoZer	web design/publishing
LabVIEW	data collection (data acquisition & instrument control)
L'Annee Philologique	online information source (ancient Mediterranean world)
LaTeX, MiKTeX	mathematical typesetting/equation editing
Lectra Diamino	CAD/PLM (apparel/textile design)
Lectra Kaledo	CAD/PLM (apparel/textile design)
Lectra Modaris	CAD/PLM (apparel/textile design)
Lectra U4ia	CAD/PLM (apparel/textile design)
LifeSize equipment	videoconferencing/recording
lighting technology	professional performance & production
Linux OS (e.g., RedHat, Ubuntu)	computer operating system
LISREL	data/statistical analysis & reporting (Structural Equation Modeling)
Little Bird Tales	online communication/collaboration/publishing (create digital stories/books - focus on material for children)
LiveBinders	online communication/collaboration/publishing (content organization and sharing)
LoggerPro	data collection & analysis
Logic Pro	music recording, editing & mixing
LP360 (from QCoherent)	GIS (extension to ArcGIS' ArcMap)
Magma software (U of Sydney)	computationally intensive work in algebra, number theory, geometry and combinatorics
magnetometer	magnetic field measurement
MakeBeliefsComix	online communication/collaboration/publishing (create comic strips)
MapCruncher	conversion of maps to online format

MapProjector	electronic map presentation
MassLynx software	mass spectrometry real-time analysis
Mathcad	numerical computation/visualization
Medatrax	assessment/data tracking (health professions)
Mendeley	reference/source management
Microdem	GIS (mapping tool)
Microsoft Hyper-V	creation of virtual computing environments/server virtualization
Microsoft Project	project management
MIDI keyboards	audio input to computers for recording, editing, etc.
Mindomo	online communication/collaboration/publishing (mind mapping)
Minitab	statistical analysis and reporting
Modeller	HPC comparative modeling (3D protein structures)
Mondopad	interactive tablet & videoconferencing unit (large format)
MS SQL Server	database management
MS SyncToy	data file and folder management
MS Visual Studio	software and web application development
MultiSpec	analysis of image data
musculoskeletal ultrasound	internal imaging (musculoskeletal system)
MySQL/MySQL Workbench	database design/programming/admin.
NAMD	HPC molecular dynamics simulation
NCBI website tools (National Center for Biotechnology Information)	online tools used for cluster & blast analysis
NCLive	online information source

NetOp Vision	computer display monitoring (in labs), remote display of student screens
North Carolina Office of State Archaeology records	online information source
NWChem	HPC computational chemistry, quantum chemical & molecular dynamics
OpenGeoDa	GIS (spatial data analysis/visualization)
option pricing information	online information source
ORF Finder (Open Reading Frame Finder)	analysis of nucleic/protein sequence data
oxygen tanks	health professions clinical skills training
PCAOB	online information source
PCR (polymerase chain reaction) equipment (e.g., thermocyclers)	production of large qty's of DNA sequence copies, DNA amplification
PC-TAS	Trade Analysis System data source
Pearson MyStudentSuccessLab	online learning & assessment (skills for personal & professional dev)
Personalized Nutrition Analysis Program (PNAP)	online information source (interactive health assessment)
pH meters	pH measurement
PhP/PhP scripting tools	programming
Piazza	online synchronous learning - web-based Q&A forum
pipettors	measurement & transfer of small amounts of liquid
Pixlr	online communication/collaboration/publishing (photo editing)
Poll Everywhere	classroom response system (online/text SMS polling)
Popplet	online communication/collaboration/publishing (idea visualization)
power tools	theatrical design
Practice Fusion	online electronic med. records system (used as health IT 'sandbox')
Prodigy Anesthesia Certification Exam Simulator (PACES)	assessment practice/review (health professions)

professional audio technology (sound boards, speakers, micro	professional performance, speaking, production & recording
programming & scripting languages & frameworks (e.g., Java, C++, python, .NET w Silverlight)	programming languages used for software development
Prometheum ActivBoard & ActivExpressions Response System	interactive (electronic) whiteboard, classroom/lab presentation display, classroom response
ProQuest/ProQuest's Dialog	online information source
ProTools	music/audio recording & editing
PsycInfo	online information source (psychology literature search)
Pyware	music education software (e.g., drill design, assessment)
QDA Miner	qualitative data analysis
QT (framework)	development of software applications with GUIs (graphical user interfaces)
QuestGarden	online communication/collaboration/publishing (webquest creation)
R	data/statistical analysis & reporting (statistical programming)
RADAN 7	GIS (Ground Penetrating Radar ["GPR"] data processing)
Rasmol	molecular visualization
Re:discovery	digital collections/asset management
research ethnics training (web-based)	online information source/assessment
restriction digest equipment	DNA preparation for analysis/processing
RestrictionMapper	analysis of nucleic/protein sequence data
RIA Checkpoint	online information source
routers	network connectivity within network simulation labs and other private network facilities
SAGE	computer algebra system
Saguaro Tools	GIS (ArcMap tools extension)
Sapling Learning	online learning & assessment (physical & life sciences)

SAS Enterprise Miner	data mining/analytics
scales/balances	weight measurement
SciFinder	online information source
SEC/SEC Edgar database	online information source
SevenZIP	file compression/archiving
SFTP software (e.g., WinSCP)	file transfer (esp between local and remote system)
Sibelius	music composition & notation software
Sigma Plot	data analysis and graphing
Sigmaplot	data/statistical analysis & reporting (esp scientific data analysis & graphing)
Singular	computer algebra system
Smart Music	music education software
SmartPLS	data/statistical analysis & reporting (Structural Eq. Modeling)
Snagit	screen capture (image + annotation/effects)
Snipping Tool	screen capture (image + annotation)
soil sampling & measurement equipment	various equipment for drawing samples from & taking measurements on terrestrial environment
SoundMax	audio signal processing
Spartan from Wavefunction, Inc.	molecular modeling & computational chemistry HPC software
SpartanTex (authored at UNCG)	compile documents written in LaTeX as Google Docs
specialized printers	meet specialized printing needs (e.g. cartographic plotter in Geography, large format plotter in Int Architecture)

spectrometers/spectroscopy equipment & software	spectrometry - Quadrapole mass spectrometry, Gas Chromatograph-Mass Spectrometers, nuclear magnetic resonance (NMR), UV-Vis (ultraviolet-visible spectroscopy), FT-IR (fourier transform infrared spectroscopy), Circular Dichroism, Spectrophotometers, Atomic Absorption, EPR (electron paramagnetic resonance)
SPRi, HIM, MRI & other nanotechnology-related equipment (JSNN)	see http://jsnn.ncat.uncg.edu/facility/list-of-gatewayurp-jsnn-equipment/
Stats Portal	online basic statistics practice
Storybird	online communication/collaboration/publishing (create digital visual stories)
Stripgenerator	online communication/collaboration/publishing (create comic strips)
Surfer	GIS (contour & 3D surface mapping)
Swiss-PdbViewer from DeepView	molecular modeling & visualization
SYBYL	HPC molecular simulation
Symbaloo	online communication/collaboration/publishing (bookmarking organization)
Systat	statistical analysis/reporting
Tar Heel Reader	online information source
task trainers (airway, CVP, regional)	health professions clinical skills training & assessment
telescopes	astronomy exercises
Tell Me More (TMM)	foreign language learning and assessment
terminal software (e.g., PuTTY)	interactive session access to remote systems
thermometers & temperature meters	temperature measurement
TinkerPlots	instruction - data, probability, graphs
TodaysMeet	online communication/collaboration (focused on real-time audience feedback/questions for presenters)
TopoMapCD	digital map collection

TrackStar	online communication/collaboration/publishing (organize & annotate websites for use in teaching)
TransCAD	GIS - transportation planning
Twitter	online communication/collaboration/publishing
two-way surveillance mirrors	allow observation of human subjects w/out the subject being able to view the observer
Unity	graphics/development engine (e.g., for video game development)
UPSs (uninterruptable power supplies)	power backup for servers in labs and "machine rooms" used by academic programs
Ustream	video streaming (live broadcasts)
various other microscopes	stereo, compound, etc.
various other online databases	online information source (e.g., Fed Govt website, company databases)
various other video production/editing software	video/multimedia creation & editing
vector cloning technology	DNA cloning via insertion of foreign DNA into an organism
Vectorworks	CAD software
Vernier probe systems (with GoLink interfaces & sensors) & Vernier Logger Pro software	sensors & probes (e.g., spectrometer, pH, conductivity, pressure); data collection software
Videatives	online information source (video clips for early childhood)
videophones	telephone with video display
Virtual Philosopher & Virtual Executive online tools	interactive online learning resources (philosophy)
VMWare software	creation of virtual computing environments/server virtualization
VNC virtual display mirroring software	remote monitoring of human-computer interaction through mirrored computer screen display
Vocaroo	online communication/collaboration/publishing (audio recording & publishing)
Voki	create speaking avatars
Wave aspects & string wave software	wave modeling, motion detection
Web of Science	online information source (citation index)

Weebly	online communication/collaboration/publishing (blogging & website creation)
WHO Anthro	data/statistical analysis & reporting (human growth & development data)
whois.net	domain name/website information (e.g., IP address lookup, site registration/ownership)
Windows Journal	notetaking software (handwritten notes)
Windows Live Movie Maker	video editing
Windows Movie Maker	video/audio creation & editing
WINSTEPS Rasch Software	data/statistical analysis & reporting (item response theory)
Wolfram's Mathematica	computational software
X Windows software - Cygwin, X-Win32	X Windows environment
Xcaliber software	mass spectrometry real-time analysis
X-ray crystallog technology	crystallography - measurement/visualization of atomic & molecular structure of crystals
Xtranormal [discont. 7/31/13]	online communication/collaboration/publishing (create & publish 3D animated video)
ZooBurst	online communication/collaboration/publishing (create interactive 3D pop-up books)
Zotero	reference/source management
ZUNAL WebQuest Maker	online communication/collaboration/publishing (webquest creation)