

# **Enhancing Student Learning Experience with Upgrading Majors Lab**

## **Project Description**

The Majors lab (LOV025) is a computer lab that is available to any student taking a Computer Science class, Computer Science majors, and Computer Science graduate students. It is open seven days a week, 9am to 10pm on weekdays and 10am to 7pm on weekends. There are 36 computers currently in this lab with a dual-boot setup (Windows 10 and Linux Mint) and software tailored to the needs of Computer Science classes, e.g. Visual Studio for C/C++ and C# Programming, ModelSim and Icarus Verilog for Computer Organization, Python, Scheme and Prolog for Programming Languages, MySQL for Database Systems, and SSH and Xming for accessing CS UNIX/Linux servers and services.

The majority of the computers currently in the Majors lab were purchased with a Tech Fee grant dispensed in 2011. Due to heavy use and the passage of time, there have been many hardware failures, and these failures are becoming increasingly common as the hardware continues to age. Twelve of these computers, five LCD monitors, and a printer were replaced with student tech fee funding last year.

This year, we would like to again replace twelve of the computers in the Majors lab.

## **Impact of the project**

The Majors lab is a critical tool that makes programming courses accessible for all students, not just those who can afford their own computer. In this fall semester, the number of students enrolled in Computer Science undergraduate courses (excluding Computer Literacy) are over 2300 in 130 different class sections. Spring semester enrollment is similar to fall and summer semester enrollment is about 1000. Total undergraduate enrollment in Computer Science courses each academic year is over 5000. Teaching assistants for programming courses often hold office hours in the Majors lab specifically so students who do not have laptops can receive the same level of practical guidance on their work that students working on their own laptops would be able to receive. Additionally, the space is used for various Computer-Science-related activities throughout the year, including programming contests and special class projects.

## **Project Plan**

We propose to purchase twelve new computers for the Majors lab as we did last year, each having Intel Core i7 processors, 16 GB RAM, 4GB video adapters, 1TB hard drives, and 24" wide screen LCD monitors. Total cost for computer purchase is \$19,389. FSU ITS charges \$235 software license fee for each computer purchased. The total license fee is \$2820. Total cost of the project is \$22,209.

## **Relationship of this project to other university activities**

ACM's FSU Chapter uses the Majors Lab to host programming competitions in spring and fall semesters and has a dedicated room inside the lab for ACM related activities. ACM, the Association for Computing Machinery, is an international scientific and educational organization dedicated to advancing the arts, sciences, and applications of information technology. It is a leading resource for computing professionals and students working in the various fields of Information Technology, and for interpreting the impact of information technology on society.

### **Ongoing Support**

The purchase of these computers comes with a five-year warranty. Technical support will be provided by the Computer Science Department. There will be no recurring costs or technical support costs for this project.

### **Project Team Description**

The project team consists of the Systems Group led by Yu Wang. Mr. Wang has Master's Degree in Computer Science and 16 years of experience administering large complex computer and network systems. He also holds Cisco professional certificates in network infrastructure.

### **Budget justification**

Please see "Student Technology Fee Budget Template for 2016 Project Funding Proposal" in supporting documents section.

### **Supporting documents**

1. Photos of the Majors Lab
2. Price quotes on computers
3. Student Technology Fee Budget Template for 2016 Project Funding Proposal


Photos of the Majors Lab



12/9/2016 12:07:45 PM  
eQuote Details

<b>eQuote Number</b>	1021485138544
<b>eQuote Name</b>	Majors Lab computers and monitors
<b>Customer Number</b>	143905878
<b>Contract Code:</b>	29ABG
<b>Saved On</b>	12/9/2016
<b>Expires On</b>	2/7/2017
<b>Saved By</b>	yuwang@cs.fsu.edu
<b>Premier Page</b>	Florida State University SpearMart

### eQuote Cart Contents

Item	Quantity	Estimated Ship Date	Price
 <p><b>OptiPlex 7040 Mini Tower -</b> (\$1,255.76/ea) <span style="float: right;">12</span> <span style="float: right;">✓ 12/9/2016</span> <span style="float: right;"><b>\$23,919.36</b></span>  <b>Great value and in-stock for fast shipping</b>                      OptiPlex 7040 MT  <span style="color: orange;">Premier Discount</span> <span style="float: right;">(\$8,850.24)</span></p>			<b>\$15,069.12</b>

<b>Catalog Number</b>	<b>84 / s024o7040mtusr</b>
<b>Category</b>	<b>Description</b>
OptiPlex 7040 MT	OptiPlex 7040 Mini Tower BTX
Memory	16GB (2x8G) 2133MHz DDR4 Memory
Keyboard	Dell KB216 Wired Keyboard English Black
Video Card	AMD Radeon™ R7 350X (4GB DP/DVI-I)
Driver	No Wireless Selected
Hard Drive	M.2 256GB PCIe NVMe Class 40 Solid State Drive
Media Card Reader	No Media Card Reader Selected
Operating System	Windows 10 Pro, 64bit English, French, Spanish
Mouse	Dell MS116 Wired Mouse Black
Network Card	No Bcom required
Removable Media Storage Device	8x DVD+/-RW 9.5mm Optical Disk Drive
Wireless	No Wireless
Power Cord	System Power Cord (English)
Documentation/Disks	Safety/Environment and Regulatory Guide (English/French Multi-language)
Hardware Support Services	5 Year Hardware Service with Onsite/In-Home Service After Remote Diagnosis
Systems Management	Intel vPro Technology Enabled
Diagnostic CD / Diskette	No Diagnostic/Recovery CD media
Placemat	Quick Reference Guide, Win 10
Canada Ship Options	US No Canada Ship Charge

<b>Catalog Number</b>	<b>84 / s024o7040mtusr</b>
<b>Category</b>	<b>Description</b>
Chassis Options	OptiPlex 7040 MT with 240W up to 85% efficient Power Supply (80Plus Bronze)
E-Star	ENERGY STAR Version 6.0
Processor	Intel® Core™ i7-6700 Processor (Quad Core, 8MB, 8T, 3.4GHz, 65W)
Dell Data Security Encryption	No DDPE Encryption Software
UPC Label	Print on Demand Label
TPM Security	TPM
Back Cover	Secure Cable Cover
Packaging	Shipping Material for System, Minitower
Stands and Mounts	No Integrated Stand option
FGA Module	7040MT_1H17_026/US/BTS
Cables and Dongles	No Adapter
Dell Threat Protection and Endpoint Security Suite	No Dell Data Protection   Endpoint Security Suite Software
Optical Software	Cyberlink Media Suite Essentials without Media for Win10/8.1
Additional Hard Drive	No Additional Hard Drive
Label	Reg Label, MT, MEX,EPA
CompuTrace Offerings + Stoptrack Label	No Computrace
Serial Port/PS2 Adapter	No Accessories
Hard Drive Software	NO INTEL RESPONSIVE
Processor Branding	Intel Core i7 vPro Label
Microsoft Application Software	Microsoft Office 30 Day Trial
Non-Microsoft Application Software	Windows 10
RAID Connectivity	NO RAID
Operating System Media	OS-Windows Media Not Included
Transportation from ODM to region	BTS/BTP Shipment
External Speakers	No External Speaker

	<b>Dell UltraSharp 24 Monitor - U2415</b> (\$359.99/ea)	12	12/9/2016	<b>\$4,799.88</b>
	Dell UltraSharp 24 Monitor - U2415			<b>(\$480.00)</b>
	Dell Part#: 860-BBFT			<b>\$4,319.88</b>

Price does not reflect applicable shipping, taxes and state environmental fee.

**Subtotal** **\$19,389.00**

Same day shipment subject to order size limitations, Dell standard shipping methods and payment via credit card, gift card or Dell Business Credit. Notification will be provided if there are payment delays which could impact shipping date. Electronics and accessories may ship separately.

Smart Selection. Limited quantities. Only available for orders placed by 5:59 p.m. CT Mon.-Thurs. Systems shipped the next business day after an order is placed. Subject to order approval. Software and accessories not part of the configuration will be shipped separately and may arrive after your system. Please note that Smart Selection Configuration pricing cannot be combined with other pricing offers or discounts provided or agreed to by Dell. \*\* Orders with Custom Factory Integration might require additional processing time.

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<sup>1</sup>Subject to applicable law and regulations.

## Student Technology Fee Budget Template for 2016-2017 Project Funding Proposal

Project Title: Hardware upgrade for Computer Science Majors Lab

Organization or College: Arts and Sciences

Department or Unit: Computer Science

Project Period Start Date: 5/1/2017 End Date: 5/30/2017

### I. Senior/Key Personnel

List senior and / or key personnel whose compensation will be funded through project non-recurring funds

First Name	Middle Name	Last Name	Project Role	Requested Salary	Fringe Benefits	Funds Requested
A.						
B.						
C.						
D.						
<b>Total Funds Requested for Senior/Key Personnel</b>						\$ -

### II. Student & Other Personnel

	Requested Salary	Fringe Benefits	FTE	Funds Requested
Graduate Students				
Undergraduate Students				
Other Personnel				
<b>Total Funds Requested for Students &amp; Other Personnel</b>				\$ -
<b>Total Salaries, Wages &amp; Benefits</b>				<u><u>\$ -</u></u>

## Student Technology Fee Budget Template for 2016-2017 Project Funding Proposal

### III. Equipment

List items and dollar amounts for each item, including software, (or multiple items of the same type with a total cost of) over \$2,000 - add lines as needed

Item Description	Funds Requested
A. Computer Dell OptiPlex 7040 with 24" LCD monitors. \$1615.75 each and 12 total	19,389
B.	
C.	
D.	
<b>Total for items over \$2,000</b>	\$ 19,389.00
<b>Total for Additional items (less that \$2,000 each)</b>	\$ 2,820.00
ITS Onetime Software License Fee. \$235 each and 12 total	
<b>Total Equipment Costs</b>	\$ 22,209.00

### IV. Other Costs

	Funds Requested
Materials & Supplies	
Consultant Services	
Equipment or Facility Rental/Use Fees	
Additional Project Costs (describe in budget justification)	
<b>Total for Others Costs</b>	\$ -

<b>Total Project Cost</b>	<b>\$ 22,209.00</b>
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