## 2017-2018

### Campus and Unit Technology Plans

**July 1, 2017**

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### Alexandria Campus

**FY18 Campus Technology Plan**

<table>
<thead>
<tr>
<th>Project/Activity</th>
<th>Amount</th>
<th>Start Date</th>
<th>Completion Date</th>
</tr>
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<tbody>
<tr>
<td>1 IT (Information Technology)</td>
<td>$17,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>2 Liberal Arts</td>
<td>$98,698</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>3 LTR (Learning and Technology Resources)</td>
<td>$55,612</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>4 MSE (Math, Sciences &amp; Engineering)</td>
<td>$106,556</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>5 SPS (Social &amp; Professional Sciences)</td>
<td>$91,645</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td><strong>TOTAL TECH PLAN</strong></td>
<td><strong>$369,511</strong></td>
<td><strong>7/1/17</strong></td>
<td><strong>6/30/18</strong></td>
</tr>
</tbody>
</table>

### NARRATIVE

1) **IT**

- **IT Manager Maintenance & Operations (M&O)** $7,000
  - Supervisor Responsible: Dave Babel (IT Manager)
  - Planned implementation date: 7/1/17
  - Planned Completion date: 6/30/18
  - Expected Source of Funds: Campus Tech Plan

  Description: $20,000 is needed for network cabling materials and to pay for the labor costs that the contractor bills for installing network cabling.

  Funds are also needed for various IT Operations/Technology items including KVM switches, a degaussing machine, remote software utilities for IT Staff to use centrally, tool sets, spare hard drives, spare RAM, keyboards and mice, and spare power supplies to replace bad computer parts, HDMI to mini-display port adapters, VGA to HDMI adapters, and computer-video cables.

- **Audio/Visual Equipment Support** $10,000
  - Supervisor Responsible: Dave Babel (IT Manager)
  - Planned implementation date: 7/1/17
  - Planned Completion date: 6/30/18
  - Expected Source of Funds: Campus Tech Plan

  Maintenance and supply items are needed to support the A/V equipment in classrooms to include lamps/bulbs for LCD projectors, standby LCD projectors, digital audio/video cabling, and necessary systems repair for items that are out of warranty.

2) **Liberal Arts**

- **Music** Total $44,440
  - Person Responsible: Jonathan Kolm
  - Planned implementation date: 7/1/17
  - Planned Completion date: 6/30/18
  - Boston upright piano (2) x $11,800 = $23,600
56  5 Octave Yamaha marimba $14,560
57
59  M Audio speaker set (to replace speakers stolen from AT 131): $680
60
61  7.1 Speaker system and installation in 222: $5,600

b. Communication Design:  Total $24,308
   Person Responsible: Lisa Hill (AD Communication Design)
   Planned implementation date: 7/1/17
   Planned Completion date: 6/30/18
   Expected Source of Funds: ETF funds

   4 Richoh Laser Printers @ $3,885 each
   $15,540
   SP C840DN
   ID: 408105

   Need to print 8 1/2 x 11, 11 x 17 and 12 x 18 in the bypass tray.

   We will need 2 sets of ink cartridges for each machine.
   Qty: 8 black x $199 = $1,592.00
   Qty: 8 cyan x $299 = $2,392.00
   Qty: 8 yellow x $299 = $2,392.00
   Qty: 8 magenta x $299 = $2,392.00

   Cartridge total = $8,768

   This microphone is perfect to record student lessons, and to use as a teaching

c. Photography and Media Photography + Media Program  Total $29,950

   1. Quantity 6 MacBook Pro laptop 15” w/Retina display 2.5 GHz  $13,800
      Person Responsible: Aya Takashima
      Planned Implementation Date: 7/1/17
      Planned Completion Date: 6/30/18
      Expected Source of Funds: ETF

      These laptops will be used at each of the six lighting setups in the Lighting Studio for tethered
      shooting that allows the photographer to more accurately judge the sharpness, color, lighting and
      composition of the image while photographing.

   2. Quantity 1 Ikan V-Mount Pro Power Kit-190  $1,500
Person Responsible: Page Carr  
Planned Implementation Date: 7/1/17  
Planned Completion Date: 6/30/18  
Expected Source of Funds: ETF

This field monitor professional dual charger and two battery kit with digital status indicators would allow continuous power for our Ikan D12 field monitor for remote monitoring of a moving camcorder by a video team or director who can better concentrate on composition, lighting, acting and directing the camera person.

3. **Quantity 6 Wacom Intuos Photo Pen and Touch small Tablets**  
   Black, small $600  
Person Responsible: Aya Takashima  
Planned Implementation Date: 7/1/17  
Planned Completion Date: 6/30/18  
Expected Source of Funds: ETF

These graphic tablet and pen/brush input/output devices allow photographers working in photography post-processing software such as Adobe Photoshop to draw, retouch and manipulate images with real time variable pressure width and opacity strokes and see the results directly on their image.

**New Requests**  
Listed in priority order

4. **Nikon Key Mission 360 Camera** $750  
   Person Responsible: Page Carr  
   Planned Implementation Date: 7/1/17  
   Planned Completion Date: 6/30/18  
   Expected Source of Funds: ETF

This 360 degree camera is the latest in the new class of “action cameras”. It is capable of recording, processing and directing image outputs from cropped still images to time lapse, slow motion, and 4k video. These cameras are increasingly used by professional photographers in everything from architectural photography to commercial and sports photography.

5. **GoPro action camera** $500  
   Person Responsible: Page Carr  
   Planned Implementation Date: 7/1/17  
   Planned Completion Date: 6/30/18  
   Expected Source of Funds: ETF

A GoPro camera is needed to familiarize students with it’s use. GoPro action cameras are used by
professional photographers for event photography, sports, and more.

6. **Smith-Victor Ultra Cool lights and diffusers** $1600
   
   Person Responsible: Aya Takashima
   Planned Implementation Date: 7/1/17
   Planned Completion Date: 6/30/18
   Expected Source of Funds: FF&E

   Our existing Smith-Victor photoflood lights for our lighting classes are old and many are no longer functioning and/or missing parts or broken. These lights are critical for our lighting classes as a foundation for learning to see the effect of lights on the subject live, before they learn strobes which don’t allow students to see the lighting equipment’s effect live on the subject.

7. **Polaris flash/ambient light meters** $750
   
   Person Responsible: Aya Takashima
   Planned Implementation Date: 7/1/17
   Planned Completion Date: 6/30/18
   Expected Source of Funds: Campus Tech Plan or ETF

   We currently have four digital flash meters, and need to have six – one for each of the six shooting areas in our new building’s lighting studio, so each group of students has one flash meter.

8. **Canon EOS 5D Mark IV DSLR camera with 24-105 f/4 L II lens** $5000
   
   Person Responsible: Page Carr
   Planned Implementation Date: 7/1/17
   Planned Completion Date: 6/30/18
   Expected Source of Funds: Campus Tech Plan or ETF

   The Nikon 5D Mark iv’s Dual Pixel RAW offers photographers a number of functions for post-production adjustment with included Canon’s Digital Photo Professional software. This includes fine adjustments of critical focus after the shot is made, such as adjustment of critical focus areas like face and eyes. Allowing post-production fine adjustment of focus is new with this camera and very desirable to save images that are just slightly out of focus.

9. **X-Rite ColorMunki Photo Color Management Solution** $500
   
   Person Responsible: Robert Laubach
   Planned Implementation Date: 7/1/17
   Planned Completion Date: 6/30/18
   Expected Source of Funds: Campus Tech Plan or ETF

   A second ColorMunki colorimeter with software is needed for the new building as a backup for the first, and so two staff members can work efficiently at the same time in different computer labs to do monthly color calibrations of iMac displays and digital projectors.
This high resolution digital rangefinder camera is needed to allow students to learn to use rangefinder cameras and their advantages and disadvantages.

A longer focal length zoom lens is needed for our two Sony A7ii mirrorless digital cameras to complement our present 24-70mm zoom lens.

A set of six orange and six black five pound weight bags is needed for lighting and video students to use to weigh down light stands and other equipment, securely balancing the equipment mounted atop the light stands.

Two Microphone Pop Screens are needed for video classes’ audio recordings with microphones to eliminate the pop sound from voice talent’s speech causing pop sounds on the recording.
Two Auray MS-5230T tripod microphone stands with telescoping boom are needed for video students to mount and position audio microphones.

### 3) LTR

#### a. Division Request
- **Total $2,400**
- **Supervisor Responsible:** Dr. Frances Villagran-Glover, LTR Dean
- **Planned Implementation Date:** 7/1/17
- **Planned Completion Date:** 6/30/18
- **Expected Source of Funds:** Campus Tech Plan

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Digital Signage</td>
<td>$2,400</td>
</tr>
<tr>
<td>- Digital Signage Player box</td>
<td>$800</td>
</tr>
<tr>
<td>- 50-inch monitor</td>
<td>$1000</td>
</tr>
<tr>
<td>- Installation fee</td>
<td>$600</td>
</tr>
</tbody>
</table>

Two digital signs will be placed near two main entrances in Bisdorf Building for advertising current events on campus with easy to modify features.

#### b. TILT Equipment Needs: **Total $20,325**
- **Supervisor Responsible:** Kirstin Riddick, TILT
- **Planned Implementation Date:** 7/1/17
- **Planned Completion Date:** 6/30/18
- **Expected Source of Funds:** Campus Tech Plan

1. **RICOH Theta S 360 Camera (5 total)**
   - **$1,500**
   - The Ricoh Theta S allows one to create and share 360 degree images. Having this capability will enhance and expand multimedia use in instructional practice by enabling students, faculty and staff to produce 360 degree multimedia for virtual field trips, digital storytelling, and VR photo journalism projects.

2. **iPad Pros 12.9 inch (10 total)**
   - **$11,000**
   - There is an increase usage of mobile technology usage in the classroom. Instructors are using the tools to facilitate classes, engage students, and proctor assessments. Some students may not have their own personal devices. iPad Pros will also be used in the TILT Center for workshop facilitation and demonstration.

3. **Apple Pencil (10 total)**
   - **$1,000**
   - Used in concert with the iPad pro, users will be able to sketch and draft. This will prove especially beneficial for our art students and engineering students who need to create and produce digital prototypes.
4. **Smart Keyboard for iPad Pro (10 total)**
   Keyboard works in concert with iPad Pro 12". This will expand the input, processing ability of the tablet. Keyboard doubles as a protective cover.

5. **Dell Precision Workstation w/ PNY GTX PNY Graphic Card (2 Total)**
   The Dell Precision Workstation will enable students to use and develop VR programming with the Oculus Rift and Touch. These workstations will be housed in the campus MakerSpace.

6. **Makerbot Flexible Filament and Extruder+**
   Flexible filament will enable faculty and students to create 3D models that are more pliable, enabling the ability to create functional hinges, joints, and shaped parts. An extruder will enable the printer to print 3D objects with ease.

7. **Bloxels Classroom 15 Pack**
   Bloxels is a hands-on platform for students to create, build, collaborate and brainstorm through video game creation. This STEAM tool will be used in the campus MakerSpace. Students can channel their creative potential as they gain greater understanding of important topics like design logic, and computer science and demonstrate their knowledge of history, science and mathematics and more through the experiences they create.

c. **Library Equipment Needs:**
   **Total $29,687**
   Supervisor Responsible: Matthew Todd, Library
   Planned Implementation Date: 9/1/2017
   Planned Completion Date: 6/30/18
   Expected Source of Funds: Campus Tech Plan

   1. **Laptop Kiosk for a 12-bay system**
      **$29,687**
      12-bay Laptop Host Station 30"w x 29"d x 60"h set
      for Default Laptop device with RFID 4.0 Technology
      Annual Hardware Service Agreement, Gold level at 6% of equipment cost
      Annual Software License Agreement per Host Station
      Custom Kiosk Graphics
      Faronics DeepFreeze Licenses (Optional: On-site Installation and training)
      Custom Wooden Crate
      Prepay and Add Shipping

   In response to repeated student demand, driven largely by availability of this same service at the Annandale campus, the self-service lap-top kiosk would allow students to borrow a Dell lap-top for on-campus use for a four hour period. The loan is tracked through the Library circulation software and requires students to consent to a damage/loss/replacement agreement. The kiosk automatically reboots, refreshes and wipes each laptop after every use. Placement of the kiosk in a public area (Bisdorf Phase I lobby) would provide access outside normal LTR operating hours. This service would
enhance student access to technology for classroom, homework, research and other academic use. The Annandale campus having piloted this service has already worked with NOVA and VCCS IT support to implement functionality. Since the Annandale kiosk came online in August 2015 there have been over 7,000 uses.

d. Academic Success Center Equipment Needs: Total $3,032
Supervisor Responsible: Courtney Boland, ASC
Planned Implementation Date: 7/1/17
Planned Completion Date: 6/30/18
Expected Source of Funds: Campus Tech Plan

2 Dell GX9020 Desktop Computers ($880 each) $1,760
2 Smart Locking Lecterns ($438) $876
4 USB ID Card Readers ($99) $396

The Academic Success Center has recently purchased a college-wide license for Accudemia, a cloud based tutor tracking software. In order for the software to accurately track tutoring services, students will need to sign in and out of the center for each visit. Our current check-in system will not be able to support the new software program. At this time we only use one laptop as a sign in station and often have a line due to the number of students trying to check-in to the center. As the demand will double for the check-in/out station we will need to double the amount of space needed to support the process. Therefore we are requesting 2 desktop computers and locking computer lecterns. The computer stations will serve as the new sign-in/out stations to better support students using the new software and to better capture the demand of tutoring services. Additionally the improved stations will insure security of devices as well as improve customer service. The card readers will plug into the USB ports of the computer and will be programmed to pull the emplid number from the students’ ID cards. This will help to create a faster check-in/out process for students signing in to the center. We require students have their ID on their person for all services. If the students swipe their card, the Accudemia system will read their ID number and prepopulate all of the sign-in fields. If we do not have the card readers students will have to fill in all of the sign-in fields for each check in and this will slow the process and discourage students from using the services.

e. Testing Center Equipment Needs: Total $3,200
Supervisor Responsible: Ella Gilliam, Testing Center
Planned Implementation Date: 7/1/17
Expected Source of Funds: Campus Tech Plan

4 Cisco Camera $3,200
Cisco Surveillance 7.5.1 Camera. (4 each, wiring incl. $3200) The Testing Center is in need of 4 additional cameras to maximize coverage of two testing labs. Initially, the Public Safety Engineer had requested a minimum of 11 cameras for our two labs. However, only 8 cameras were approved. With only 8 cameras we have limited visibility of some areas and depending on the position a student sits, we could have no visibility. The use of cameras has significantly aided our staff in ensuring he academic integrity standards are met.
4) MSE Division Equipment Needs  

Total $106,556

a. Dean/Division Requests

Person Responsible: Chad Knights, MSE Dean
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected source of funds: ETF

1. Two CAD Lab Computers (Auto-Cad)  

$4,000

CAD software programs are resource heavy programs and require powerful computers to run without lag or errors. The current instructor station computers in our CAD labs are not able to execute the operations of the current programs without significant lag.

2. USB Port Hubs (Auto-Cad)  

$280

Twenty desktop USB hubs in our classrooms to provide easier access when plugging in flash drives. Most of our part-time faculty, and some full time faculty, use thumb drives during their lecture and laboratory session, and these hubs would provide a more convenient way of plugging thumb drives into the classroom computers. It would also help to remind the faculty member to remove the drive when their class was complete.

b. Biology

1. MakerBot 3D Printer with Flexible Matrix for Organ Printing  

$3,000

Person Responsible: Maggie Emblom-Callahan, Lead Assistant Dean
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected source of funds: ETF

The 3D printer with a flexible matrix can be directly incorporated into Anatomy and Physiology labs. Students would be able to build and visualize organs and organ components as well as comparing similar organs. The flexible matrix is more in keeping with the flex present in organs.

2. Vernier Spectrophotometer (12 total)  

$32,100

Person Responsible: Kimberly Rutledge
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected source of funds: ETF

These spectrophotometers would replace the aging and broken machines currently used in our highly enrolled Introduction to Biology Labs (Bio 101/102). Many of our current machines are broken or
emit sparks. The models proposed here interface with the other Vernier equipment we have. These could also be used for Environmental Science labs.

3. **Frog Loggers (5 total)**

   Person responsible: Kimberly Rutledge
   Planned implementation date: 7/1/17
   Planned Completion date: 6/30/18
   Expect Source of funds: ETF

   The listening devices would complement and amplify the numbers we already use in zoology as well as for student projects. We need more to be maximally effective for the size labs we run. These will also be useful for environmental science labs, as tracking amphibians is a standard practice for monitoring environmental impact of chemicals and pollutants.

4. **Heat Block (1 total)**

   Person responsible: Maggie Emblom-Callahan
   Planned implementation date: 7/1/17
   Planned Completion date: 6/30/18
   Expected Source of funds: ETF

   Heat blocks are used to prepare samples (DNA and proteins) for all biology labs including Bio 101/102/150 and Cell biology and microbiology labs. As we have introduced increased numbers of modern and technologically up-to-date labs, we increasingly need basic equipment to prepare the samples for these labs. Heat block is a standard piece of lab equipment.

5. **Power Supply for 100-120 V high current (6 total)**

   Person responsible: Kimberly Rutledge
   Planned implementation date: 7/1/17
   Planned Completion date: 6/30/18
   Expected Source of funds: ETF

   We currently use Power supplies to generate current for gel electrophoresis in all most of our Biology lab courses. Some of our power supply units have broken and need replacing.

6. **Protein Electrophoresis Instructional Lab Kit (1 kit for a classroom)**

   Person responsible: Kimberly Rutledge
   Planned implementation date: 7/1/17
   Planned completion date: 6/30/18
   Expected Source of funds: ETF

   This kit includes the hardware to run a full class of protein electrophoresis, a lab that has recently been introduced on a trial basis into our microbiology and cell biology classes. With this kit that
contains the standard equipment necessary to run protein electrophoresis, all of our micro and cell biology classes can run this standard lab.

7. Somso Nervous System Model (3 Total) $2,560
   Person responsible: Kimberly Rutledge
   Planned implementation date: 7/1/17
   Planned completion date: 6/30/18
   Expected Source of funds: ETF

   This nervous system model is an update on a standard anatomy and physiology model and improves upon the old models that are currently being used. It is also larger, allowing students to better see the components of the nervous system which they need to memorize during the normal course of Bio 141 anatomy and physiology. We need one for each lab and one for the science resource center.

8. Tooth Model Kit (3 Total) $1975
   Person responsible: Kimberly Rutledge
   Planned implementation date: 7/1/17
   Planned completion date: 6/30/18
   Expected Source of funds: ETF

   We currently do not have a tooth model. Students in anatomy and physiology as well as Bio 102 have no model representation of the teeth and specialized mouth structures. These would be invaluable to students as this is essential to developing competency for entry to nursing school. We need one set for each lab and one set for the science resource center for students to use during open-study periods.

c. Chemistry

   a. Abbe Benchtop Refractometer (1 Total) $393.60
      Person Responsible: Katherine Burton
      Planned implementation date: 7/1/17
      Planned completion date: 6/30/18
      Expected source of funds: ETF

      This equipment is required for many Organic Chemistry labs (both 245 and 246). Students must master refractometry for successful transfer of organic lab. This equipment is used during the class process of determining organic unknowns. It is used to determine the refractive index.

   b. Vernier Melt Station with capillary tubes (total 9) $5,189.60
      Person Responsible: Katherine Burton
      Planned implementation date: 7/1/17
      Planned completion date: 6/30/18
Expected source of funds: ETF

Used for all Organic labs to determine purity of products and assist in identification of unknowns. This is a required instrument for organic chemistry labs and will work with Vernier equipment we already have.

c. Flammable materials storage freezers (total 1)  $2,978.23
Person Responsible: Katherine Burton
Planned implementation date: 7/1/17
Planned completion date: 6/30/18
Expected source of funds: ETF

Need to store reactive and unstable compounds away from organic solvents.

d. Geology

a. Polarizing Microscope (1 total)  $19,670
Person Responsible: Katherine Burton
Planned implementation date: 7/1/17
Planned completion date: 6/30/18
Expected source of funds: ETF

Standard geology equipment used in many geology labs to identify samples based on polarized light signature.

e. Computer Science  Total  $3,000
Person Responsible: Emilia Butu (AD of Computer Science)
Planned implementation date: 7/1/17
Planned completion date: 6/30/18
Expected source of funds: ETF

Programming Robot

Students have done programming as part of Computer Science program for many years, and it would be a good time to anchor their skills into a growing field that has good perspective for the future: robotics. Having the opportunity to do hands on programming on an actual robot, and build applications for it can represent an important boost for the Computer Science program in our campus, and it would open new perspectives for our students, from multiple perspectives.

There are several companies that sell robots to colleges and universities, and robotics in education becomes a discipline by itself. This proposal has as object the acquisition of a programmable robot that can be used in all programming classes offered by Computer Science program: CSC 110, CSC 200, CSC 201, and CSC 202. The idea would be to purchase several kind of robots, and evaluate their use
in class, but we can start by purchasing one robot each year, and start building our portfolio of applications. The outcome of this investment would be:

- Improve teaching in programming classes by adding topics in programmable robots, and having students doing projects on actual projects.
- Create active robotics clubs on campus, and collaborate with similar clubs in other universities.
- Emulate the interest among faculty members, and develop new curriculum regarding robotics, or use of programming in artificial intelligence.

It would be interesting to purchase more than one type of robot, but if funds are limited, as stated before, we can start with one or two. Here are some alternatives.

<table>
<thead>
<tr>
<th>Name of robot</th>
<th>Manufact.</th>
<th>Web site</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robokind ZENO</td>
<td>Robokind</td>
<td><a href="http://www.robokindrobots.com">www.robokindrobots.com</a></td>
<td>$2700</td>
<td>Can be used in applications with Math and psychology departments</td>
</tr>
<tr>
<td>RobotLab BOX</td>
<td>RobotsLab</td>
<td><a href="http://www.robotsLab.com">www.robotsLab.com</a></td>
<td>$3999</td>
<td>Can be also used in developmental Math and pre-calculus</td>
</tr>
</tbody>
</table>

**e. Engineering**

Person Responsible: Mike Ghorbanian, AD of Engineering

Planned implementation date: 7/1/17

Planned Completion date: 6/30/18

Expected source of funds: Campus Tech Plan

1. **Instructor Station Computers for EGR Labs: AE 204 & AE 206 (2 total)**  $4,000

These machines require video and 3D demonstrations capabilities for instruction that the rest of the machines in the room do not require, so they need much better processor/ bus, RAM and video card. Traditionally these machines have been updated with the rest of the PCs in the room every 4 years and that is not adequate.

2. **P-Series 36x24 Laser Cutter** (Engineering Labs)  $7,995

Alexandria Campus Engineering labs strive the offer the best experience to students. As the technology evolves, adding cutting edge technology is very much part of teaching and learning. The Engineering Labs are in need of a Laser Cutter that critical for large cutting or engraving jobs. This is a large format laser that provides the tools needed to create 2D and 3D models.

3. **3D Printer (Engineering Labs)**  $3,100

When most people think of 3D modeling, they think of CAD. With the printer students will be offered an opportunity to experience first-hand the 3D models that have created in CAD. Students will have capability to print floor plans, building designs that are very critical for visualization.

**f. Mathematics**

Person Responsible: NV Fitton (AD of Mathematics)
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected source of funds: Campus Tech Plan

1. **TI-84 graphing calculators**
   - Two packs of ten TI-84 graphing calculators, one to provide calculators for faculty and another to keep in the library for students to borrow.

2. **TI-89 graphing calculators**
   - Ten TI-89 graphing calculators, five for faculty use and five to keep in the library for students to borrow.

3. **Wacom Intuos Art Pen & Touch Medium Tablet CTH690AK**
   - Two pen tablets for the use of instructors making recorded lectures.

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5) **SPS Division Equipment Needs**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Total Cost</th>
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<tbody>
<tr>
<td>Person Responsible: Geoffrey Brown, AD of Engineering</td>
<td>$32,645</td>
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<tr>
<td>Planned implementation date: 7/1/17</td>
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<td>Planned Completion date: 6/30/18</td>
<td></td>
</tr>
<tr>
<td>Expected source of funds: ETF</td>
<td></td>
</tr>
</tbody>
</table>

1. **Hunter Alignment Machine WA473-CM.**
   - Total cost $26,309.08
   - Our current DSP600 Hunter computerized measuring system for our wheel alignment rack is outdated and no longer able to support the latest upgrades required for current vehicles, it will only support vehicles made prior to 2003 and has many issues with hardware and software, shutting down at times and when working not displaying correct vehicle angles. The proposed Hunter WA473-CM is the new standard in the automotive industry and will allow instructors to teach students proper vehicles alignment using the newest technology which has become even more critical when aligning modern transportations.

2. **Automotive electricity course boards, 8 X Model 1811 and 8 X Model 1821**
   - Total cost $6,336.00
   - Our current electricity trainer boards are very old and come to the end of their useful life. We currently have 6 very old ones of which only 4 are in some sort of working order and need replacing with updated versions. We do not have any electronic trainers with which to teach our advanced electronics classes which is very necessary given the amount of electronics on vehicles these days.

Person Responsible: Ali Soleymani
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected source of funds: ETF
1. Apple Mac mini 3.0 GHz Desktop Computer ,3.0GHz Intel Core i7 Dual-Core (Haswell), 8GB of 1600 MHz LPDDR3 RAM, 1TB Fusion Drive, Intel Iris Graphics $1,800

One unit needed for instructions related to setting up Apple Small network servers & configurations

2. Apple AirPort Time Capsule (3TB) $800

Two units Needed for backup and file server for Apple computers in iMacs computer labs.

3. Arduino Hardware Kits $1,000

Arduino is an open-source electronics platform intended for teaching computer hardware and software using interactive projects.

Person Responsible: George Gonchar $55,400
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected source of funds: ETF

DSLR cameras for Multimedia Software classes - $2,500 each, 10 pcs - total $25,000
We teach graphics formats and graphics editing in ITE170 class. The students working in small groups to prepare multimedia and build a website based on it. Cameras will be used by students to prepare multimedia contents for their projects.

Laser projectors $4,000 each, 2pcs - total $8,000
The benefit of using laser projector is service free operation up to 20,000 hours, bright light, and quick start-up. They can be used in rooms 446, 414, 334C, 444, 420 improve overall presentations in the classrooms.

UHD smart TV panels 85" $7,500 each, 2pcs - total $15,000
The benefit of using UHD TV, is to have a bright 4K display that can be used to display multimedia contents, such as graphics and video, as well as improve general presentation in the classroom. They allow direct access from student's laptops to share and to present their projects in class. Rooms 446, 444

Apple Pro server $2,000 each, 2pcs - total $4,000
These will be used to update and re-image software in our Mac labs - 446, 444, 383 as well as keeping multimedia contents, including lesson files, and students' projects materials.

Database portable Server $2,000, 1pcs - total $2000
It will be used to run MS SQL Server and MYSQL Server for a presentations using ITD256 Advanced Database Management class.

Raspberry Pi 3 Complete $70, 20pcs - total $1400
Needed for teaching computer hardware and software using interactive projects in ITE221 PC Hardware and OS Architecture class.
<table>
<thead>
<tr>
<th>Project/Activity</th>
<th>Amount</th>
<th>Start Date</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Manager Support</td>
<td>$10,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>Lab Support</td>
<td>$46,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>Refresh 25% of Windows Computers on Campus</td>
<td>$500,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Campus Portion Accudemia renewal for tutoring</td>
<td>$3000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Bulbs for classroom projectors</td>
<td>$8,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>Replacement classroom screens</td>
<td>$10,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Software License Renewals</td>
<td>$5000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<td>Refresh 35 complete Classrooms to digital designs due to Age</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Remodeling Support</td>
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<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>Network closet cable clean up and organize</td>
<td>$15,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>Wireless Upgrades as needed</td>
<td>$10,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Refresh flat panels 7 yrs. or older</td>
<td>$7,500</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Apple App purchases iPad cart</td>
<td>$3,500</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Supplemental Technology for classroom refresh</td>
<td>$100,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Conference Room Technology refresh/implementation</td>
<td>$40,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Active Learning Spaces deployment</td>
<td>$40,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Podium Maintenance items</td>
<td>$10,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<td>VTC support for hardware based solutions possible expansion of capability and refresh units</td>
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<td>6/30/18</td>
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<tr>
<td>Video reinforcement in existing classroom spaces</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<td>Misc. network wiring, new drops, maintenance</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<td>Audio modifications classroom</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<td>Library media center maintenance</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<td>Library self-check-out kiosk for materials and license renewals</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>Touch Monitors for classrooms and podiums</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<td>6/30/18</td>
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<tr>
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<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>#</td>
<td>Description</td>
<td>Cost</td>
<td>Start Date</td>
</tr>
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<td>---</td>
<td>----------------------------------------------------------------------------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>27</td>
<td>Video and Audio support for conferencing and lecture capture</td>
<td>$8,000</td>
<td>7/1/17</td>
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<tr>
<td>28</td>
<td>Develop 3D printing space or campus maker space support</td>
<td>$35,000</td>
<td>7/1/17</td>
</tr>
<tr>
<td>29</td>
<td>Wireless technologies for AV connection and screen sharing</td>
<td>$15,000</td>
<td>7/1/17</td>
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<tr>
<td>30</td>
<td>Support expansion of cybersecurity program</td>
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<td>7/1/17</td>
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<tr>
<td>31</td>
<td>Vocal Booth LTR to supplement media center capabilities</td>
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<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>$1,476,000</strong></td>
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</table>

ITEM 1 IT Manager Support  
$10,000

Person Responsible: Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: Campus Tech Plan

Provide funding for various maintenance items like replacement parts, tech supplies, cables, misc. small items needing replacement etc.

ITEM 2 LAB SUPPORT  
$46,000

Person Responsible: Dr. Braddlee
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: Campus Tech Plan

Funding Supports Saturday P-14 and student hire staffing in the OCL, for evenings and weekends.

ITEM 3 Refresh 25% Windows Computers  
$500,000

Person Responsible: Bruce Ghofrany
Planned implementation date: 12/1/17
Planned Completion date: 12/30/18
Expected Source of Funds: College Tech Plan

Purchase and install Windows based computers with latest operating system and latest versions of production software. This will insure compliance with VCCS life-cycle requirements for computers

ITEM 4 Campus Portion Accudemia Renewal  
$3,000

Person Responsible: Tutoring Supervisor
Planned implementation date: 12/1/17
Planned Completion date: 12/30/18
Expected Source of Funds: Campus Tech Plan

Provide funding for the renewal of Accudemia which is critical software application for the support of tutoring services on the Annandale campus.

ITEM 5 Bulbs for projectors in classrooms  
$8,000
Person Responsible: Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: College Tech Plan

Bulb/lamp costs for projectors have reached a point where the overall costs require submission as a specific line item. Approximate cost of 40 lamps, or about 25% of our classrooms with projectors.

Item 6 Replacement Screens
Person Responsible: Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 5/30/18
Expected Source of Funds: Campus Tech Plan

Provide funds for replacement screens as they become broken or damaged. Most screens have been replaced with 16:10 format screens. These funds are for repair and replacement of damaged items. Average cost of screen installed is 550 dollars. We have approximately 20 screen repair needs per year.

ITEM 7 SOFTWARE LICENSE RENEWALS
Person Responsible: Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: College Tech Plan/Campus Tech Plan

This will fund software renewals not covered by the academic renewal process. This will include campus based applications like School Vue in labs and FSRC. Drive Shield and Deep-Freeze in library and the laptop kiosk.

ITEM 8 UPGRADE CLASSROOMS
Person Responsible: Bruce Ghofrany/Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: College Tech Plan

Upgrade classrooms as required in support of the 5 year refresh cycle. This will include installation of the college standard base design for digital classroom.

ITEM 9 SET ASIDE FOR REMODELING Support
Person Responsible: Bruce Ghofrany
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: Campus Tech Plan

This is a set aside to provide updates in classrooms as part of the remodeling process. This usually involves supplemental network drops or cabling for presentation systems as rooms are remodeled. This also includes electrical work for adding flat panels. This funding is not for new classroom systems as much as filling in gaps as needs arise after remodeling projects. For example: in 2017, these funds supported AV in the new digital anatomy lab. It also required some network and power for the lab.

ITEM 10 Network Closet cable clean-up and organize
Person Responsible: Bruce Ghofrany/Wayne Ledford

Approximate costs of 40 lamps, or about 25% of our classrooms with projectors.

$10,000

$5000

$420,000

$15,000
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: Campus Tech Plan
These funds will provide resources for outsourcing the clean-up and organizing of the cabling in the communications closet. This will provide for right sizing patch cables, bundling and labeling of cable within the closets. Over time, with heat and handling labels fall off, and cables are left out of cable management.

Item 11 Wireless Upgrades for academic buildings, library student lounges $10,000
Person Responsible: Bruce Ghofrany
Planned implementation date: 7-1-17
Planned Completion date: 6-30-18
Expected Source of Funds: Campus Technology Plan/College Technology Plan
Brief Narrative: Funds will provide for resources to reinforce wireless coverage capacity. Increased use of wireless technology in classroom identifies spots where WIFI signal requires additional support.

Item 12 Refresh flat panels > 7 years old. $7500
Person Responsible: Bruce Ghofrany
Planned implementation date: 9-1-17
Planned Completion date: 9-30-18
Expected Source of Funds: College Technology Plan/Campus Technology Plan
Brief Narrative: Funds will provide for replacement of flat panels on campus in excess of our centrally funded allotment. These panels are currently in classrooms, or part of emergency notification system.

Item 13 Apple App purchases for iPad cart $3500
Person Responsible: Bruce Ghofrany/ Wayne Ledford
Planned implementation date: 7-1-17
Planned Completion date: 7-30-18
Expected Source of Funds: Technology Plan
Brief Narrative: Funds will provide for acquisition of Apple Apps requested by faculty for use in the classroom. These Apps will be loaded on the 3 campus iPad cart iPads. Apps will be purchased through the VPP so the campus will retain ownership of all Apps.

ITEM 14 Provide Supplemental AV Technology for classrooms $100,000
Person Responsible: Bruce Ghofrany/ Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 5/30/18
Expected Source of Funds: Campus Tech Plan
Annandale campus has a number of small auditoriums like CN 117, CS 129 etc. currently serviced by a single projector. Given the size of the spaces and the number of students, faculty and student feedback is that a single projector system is insufficient for these spaces. The funding will support a new digital multi-display design and audio re-enforcement. Spaces like this also include many of the science labs in CS bldg., and the mezzanine of CT building.
Item 15 Conference room Technology refresh/ implementation $40,000

Person Responsible Wayne Ledford/Rizwan Rahman

Planned implementation date 7-1-2017

Planned Completion date 6-31-2018

Expected Source of Funds Campus Technology Plan

Brief Narrative

This funding will allow for refreshing technology in conference rooms. This will allow for transition to digital technology of aged conference room systems. This will also support technology needs in newly added spaces like the adjunct space in the CM building. These funds will support technology needs and these funds cannot support furniture or renovation needs.

Item 16 Active learning spaces $40,000

Person Responsible: Wayne Ledford/ Dr. Braddlee

Planned implementation date 7-1-2017

Planned Completion date 12-30-2018

Expected Source of Funds Campus Technology Plan

Brief Narrative

This funding will support the development and deployment of an active learning spaces on the Annandale campus also known as classroom of the future. The funding will provide technology only associated with the classroom of the future and the renovations within an existing campus space. This funding will support technology for collaboration as well as multiple displays and greater access and student participation. This funding cannot be used for classroom furniture.

Item 17 Podium maintenance items $10,000

Person Responsible: Wayne Ledford/ Bruce Ghofrany

Planned implementation date 7-1-2017

Planned Completion date 5-30-2018

Expected Source of Funds Campus Technology Plan

Brief Narrative

Funding will provide for repair, maintenance and acquisition of podiums for faculty presentation and storing of classroom technology. This funding will provide for maintenance items like replacements for broken shelf brackets, broken document camera shelf, and broken doors and locks. Items like monitor stands and rack shelves are also included.

Item 18 VTC support for Cisco solutions $25000

Person Responsible: Wayne Ledford/ Bruce Ghofrany

Planned implementation date 7-1-2017

Planned Completion date 5-30-2018

Expected Source of Funds Campus Technology Plan

Brief Narrative

Funding will provide support for hardware based Video Teleconferencing System. As teleconferencing grows in popularity, there will likely to be increased demand for VTC. These funds will provide support for existing equipment as well as purchase of new equipment. These funds will support licensing needs, repair and
replacement needs. We may also have to upgrade equipment to maintain compatibility with communication bridges at the college and VCCS.

Item 19 Video reinforcement for existing digital spaces $20000
Person Responsible: Wayne Ledford/ Dr. Braddlee/Bruce Ghofrany
Planned implementation date 7-1-2017
Planned Completion date 7-30-2018
Expected Source of Funds Campus Technology Plan
Brief Narrative
Funding will provide for acquisition and installation of flat panels into 45 student plus classrooms. The monitors will provide video reinforcement for ‘back of the room’ students. The deployments will be focused on 60+ person spaces with unique characteristics like flat floors and difficult viewing angles.

Item 20 Misc. network wiring maintenance $10000
Person Responsible: Wayne Ledford/ Bruce Ghofrany
Planned implementation date 7-1-2017
Planned Completion date 5-30-2018
Expected Source of Funds Technology Plan
Brief Narrative
Funding will provide misc. network drops as the need arises.

Item 21 Audio enhancements classrooms $12,000
Person Responsible: Wayne Ledford/ Bruce Ghofrany
Planned implementation date 7-1-2017
Planned Completion date 5-30-2018
Expected Source of Funds Campus Technology Plan
Brief Narrative
Funding will provide for multiple ceiling mounted speakers, installation and cable. In this way, program audio in classes will no longer be limited to two front of the classroom speakers. This will allow for more equal audio volumes to the entire space. These funds will also support the addition of voice reinforcement to large classroom and auditoriums.

Item 22 Media Center Maintenance $5000
Person Responsible: Dian Aram
Planned implementation date 7-1-2017
Planned Completion date 5-30-2018
Expected Source of Funds Technology Plan
Brief Narrative
Funding will provide support for the media center in the library. Items will include replacement still cameras, movie cameras, and other media processing tools used by students in the media center in the library.

Item 23 Self-Check-out Kiosk $15000
Person Responsible: Dr. Braddlee
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Touch monitors for classroom and podiums</td>
<td>$20,000</td>
</tr>
<tr>
<td>25</td>
<td>Replace existing Type II network cable</td>
<td>$20,000</td>
</tr>
<tr>
<td>26</td>
<td>Technology capable furniture</td>
<td>$30,000</td>
</tr>
<tr>
<td>27</td>
<td>Support for software video solutions</td>
<td>$8,000</td>
</tr>
</tbody>
</table>

**Person Responsible:**
- Bruce Ghofrany/Wayne Ledford
- Bruce Ghofrany/Dr. Braddlee/Wayne Ledford
- Wayne Ledford

**Brief Narrative**
- Funding will provide for the purchase of a self-check-out kiosk software license and system maintenance.
- The system will interface with the current library management software, allowing staff to focus more on supporting student’s research needs.
- Funding will provide for the purchase of touch monitors to support the teaching of touch based applications.
- This will continue to support the teaching of Windows 10 in the classrooms as well as support the pilots for touch based AutoCAD applications. This will also provide for replacement for SMART ‘symposiums’ as they fail or require replacement.
- Funding will provide for the replacement of the remaining Type II (Token Ring) network cable on second floor of CG building. This provides for the option of replacement should the CG building renovation not move forward in the planning phase.
- Recent classroom review revealed some damaged technology furniture in the classrooms. These include adjustable faculty tables in CA where the ratchet is broken. Adjustable height desks are popular with faculty, and may serve the classroom and teaching better than the current podium and table.

**Expected Source of Funds**
- Technology Plan
- Campus Technology Plan
Brief Narrative

Funding will provide for acquisition and installation of audio and video source inputs for use with screen capture and recording software like Panopto. In the event lecture capture is not available these funds can support the acquisition of similar software for use by faculty for creating voice over power-point and other video/audio projects.

Item 28 develop a 3-D printing depot or maker space $35000

Person Responsible: Wayne Ledford/ Dr. Braddlee/Hector Revollo
Planned implementation date 7-1-2017
Planned Completion date 7-30-2018
Expected Source of Funds Campus Technology Plan

Brief Narrative

Funding will provide support for a 3-D printing pilot or the launch of a maker space. The desire to provide a maker space for the Annandale campus is great, and this will provide for technology needs if the space is launched during the next planning period. This may include 3-d printers, software, or high powered computers to support student design work.

Item 29 Wireless Technologies for AV $15,000

Person Responsible: Wayne Ledford/ Bruce Ghofrany
Planned implementation date 7-1-2017
Planned Completion date 7-30-2018
Expected Source of Funds Campus Technology Plan

Brief Narrative: Provide funding for the purchase of wireless technologies to allow for screen-casting or AV system sharing between students in the class and the classroom AV system. Share-link devices launched during last planning period are popular with faculty and this will provide resources to deploy additional units. This will support screen sharing in conference rooms or classrooms.

Item 30 Support Expansion of cybersecurity program $10,000

Person Responsible: Celeste Dubock-Smith
Planned implementation date 7-1-2017
Planned Completion date 7-30-2018
Expected Source of Funds Campus Technology Plan

Brief Narrative: These funds will provide for technological support of the cybersecurity program. Items may include additional network switches for creating isolated labs, or servers for use within the cybersecurity lab for ‘hacking’ or security exercises.

Item 31 Vocal Booth LTR to supplement media center capability $18,000

Person Responsible: Diana Aram, Dr. Draddlee
Planned Implementation Date: 12-1-2017
Planned Completion Date: 12-14-17

Expected Source of Funds: Campus Technology Plan

Brief Narrative: The media center in the library currently does not have a ceiling and operates with temporary wall type structures. The environment is loud, noisy and busy. This is not suitable to allow students to make audio recordings or narratives. Recordings in this environment are low quality and not representative of student’s best work. The audio booth would provide a sound proof environment for students and faculty to make high quality recordings.
<table>
<thead>
<tr>
<th>Project/Activity</th>
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<th>Actual Spending (Tech Plan funds only)</th>
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<td></td>
<td>Description</td>
<td>Amount</td>
<td>Start Date</td>
<td>End Date</td>
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<td>21</td>
<td>Video Wall</td>
<td>$45,000.00</td>
<td>11/01/2017</td>
<td>02/28/2018</td>
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<tr>
<td>22</td>
<td>Replace Projection Screens</td>
<td>$68,000.00</td>
<td>07/01/2017</td>
<td>06/30/2018</td>
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<td>23</td>
<td>Printer Replacement</td>
<td>$2000.00</td>
<td>07/01/016</td>
<td>06/30/2018</td>
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<tr>
<td>24</td>
<td>Patch Cables</td>
<td>$5000.00</td>
<td>07/01/2017</td>
<td>06/30/2017</td>
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<td>25</td>
<td>Wireless Access Points</td>
<td>$10,000.00</td>
<td>07/01/2017</td>
<td>06/30/2017</td>
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<td>26</td>
<td>Hard Drives</td>
<td>$5,000.00</td>
<td>07/01/2017</td>
<td>06/30/2017</td>
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<tr>
<td>27</td>
<td>Software Licensing and Apps</td>
<td>$5,000.00</td>
<td>07/01/2017</td>
<td>06/30/2017</td>
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<td>28</td>
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<td>29</td>
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<td>30</td>
<td>Hard drive duplicator</td>
<td>$14,000.00</td>
<td>07/01/2017</td>
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<td></td>
<td><strong>Total FY17-18 Request</strong></td>
<td><strong>$612,670.00</strong></td>
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1: SchoolVue Licenses ($8,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 08/30/17
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Annual license fee the Reston Center, Signal Hill, and the Loudoun campus.

2: Lab Support ($86,000)

<table>
<thead>
<tr>
<th>Campus Lab Support 2017-17</th>
<th>Total Hrs. Needed per week</th>
<th>Rate</th>
<th>Total per week</th>
<th>Total per year</th>
<th>Hours open</th>
<th>Charge of Funds</th>
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<tr>
<td>PC Lab</td>
<td>Weekday, Nights and Weekends</td>
<td>25</td>
<td>$17.00</td>
<td>$425.00</td>
<td>Mon-Thu 4:30pm-10pm,</td>
<td>Provost, Charles</td>
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<table>
<thead>
<tr>
<th>Department</th>
<th>Service</th>
<th>Weekdays/ Nights/ Weekends,</th>
<th>Hours</th>
<th>Personnel</th>
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</thead>
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<tr>
<td>Mac Lab</td>
<td>Weekends</td>
<td>10</td>
<td>$17.00</td>
<td>Sat 8-4pm</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>$170.00</td>
<td>Sat &amp; Sun 10am-2pm</td>
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<tr>
<td>Reston Center</td>
<td>Nights, Early Morning and</td>
<td>35</td>
<td>$17.00</td>
<td>P1: Mon-Thu 6-9:30pm</td>
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<tr>
<td></td>
<td>Weekends,</td>
<td></td>
<td>$595.00</td>
<td>P2: Mon – Thu 9:30 – 2:30</td>
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<tr>
<td>IT support</td>
<td>Weekday, Nights and</td>
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<td>$17.00</td>
<td>Mon- Thu 9am-10pm</td>
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<tr>
<td></td>
<td>Weekends</td>
<td></td>
<td>$340.00</td>
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<tr>
<td>Signal Hill</td>
<td>Weekday, Nights and</td>
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<td>$17.00</td>
<td>Mon – Thu 9am-10pm</td>
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<td></td>
<td>Weekends</td>
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<td>$340.00</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td>$86,020.00</td>
</tr>
</tbody>
</table>

3: Classroom Upgrades differential ($35,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Cover any expense not part of standard equipment.

4: APC UPS Replacement x 6 ($15,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Purchase of 6 New APC UPC Battery Backups for Communications
Closets throughout the campus that have reach more than 4 years old.

5: Collaborative Learning Areas to Upgrade Study Group Areas in LC ($45,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Data from student surveys indicate a need for more collaborative learning spaces at the Loudoun Campus. Collaborative workspaces support student engagement and student-led learning. Allow students to access and share information by allowing all participants to contribute their ideas – equally, quickly and seamlessly.

6: Upgrade Monitors x 30 ($12,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 01/01/18
Planned Completion Date: 06/01/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation(description: Upgrade monitors in areas that require larger format monitors.

7: Upgrade RAM x 30 ($3,270)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 01/01/18
Planned Completion Date: 06/01/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation(description: Upgrade RAM on systems that need additional memory due to programs that require additional ram.

8: 105 Licenses for Deep Freeze for iMacs ($5,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 01/01/17
Planned Completion Date: 11/30/17
Expected Source of Funds: Tech Plan
Brief narrative/explanation(description: Deep Freeze will be installed by IT Staff on iMacs in all Mac labs to keep the desired software configuration the same by rebooting and thus eliminating unwanted changes made by users.

9: Upgrade Video Cards x 30 ($12,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 12/31/17
Expected Source of Funds: Tech Plan
Brief narrative/explanation(description: Upgrade video cards.

10: Upgrade Mac lab x 16 ($48,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 03/03/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Upgrade MACs that need replacing.

11: Network Extron Control Systems ($15,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/01/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Upgrade Extron Control equipment in rooms requesting dual display.

12: Replace 40 original iPads purchased FY2010 ($20,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 08/31/17
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Purchase 40 Apple iPad Air 3 for 2 older iPad carts.

13: IT Manager Support ($15,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description:
- Repair of all campus computer workstations, networked printers, VCR/DVD combo, keyboards, mice, external storage, projectors, and scanners. Replacement of all projector bulbs and a surplus so bulbs can be replaced immediately.
- Replacement of printer cartridges for faculty and adjunct networked printers at all three sites.
- Replace color cartridges for plotter.
- This budget will specifically cover repair for the computers that are currently cycling out of warranty.
- Miscellaneous Network installs.

14: Audio Visual Support ($12,500)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Maintenance and supply items to support classroom instructional systems: Podiums, cameras, LCD lamps, VGA/audio/video cabling, and necessary system repairs for out of warranty equipment.

15: Technology Training & Development Staff ($12,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Training funds for Windows 8, Programming Extron equipment and Macintosh support classes.

16: Smart Podiums x 10 ($20,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 12/31/17
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: In the event a podium fails and must be returned to the manufacture for service, an adequate supply of podiums will be on hand for replacement.

17: Replace Misc. Projectors ($12,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 01/01/18
Planned Completion Date: 03/31/18
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: In the event a projector fails and must be returned to the manufacture for service, an adequate supply of projectors will be on hand for replacement.

18: Replace DMP LCDs ($20,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 12/31/17
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: Replace old LCDs in LS & LW.

19: Charging Stations ($8,300)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 11/30/17
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: With the increase in the campus population using portable devices for classroom and work related communications, this will provide a means to assist those that need to charge their devices.

20: Upgrade Communication Closets ($50,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 11/30/17
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: Patch panels need reorganizing in older communication rooms in LR to clean up the sporadic panels. This has caused a disarray of wiring.
21: Video Wall ($45,000)
Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 11/01/17
Planned Completion Date: 02/28/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Alternative to projector and drop down screen currently in large lecture classrooms.

22: Replace 3 Projection Screens ($68,000)
Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 03/31/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: A number of projection screens have various degrees of damage. This will allow for the replacement of a few screens each year.

23: Replacement Printers ($2,000)
Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: A number of printers are ageing and need replacing. This will allow for the replacement of printers each year.

24: Replacement Patch Cable ($5,000)
Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Funding will be used to purchase additional patch cables for networking needs.

25: Wireless Access Points ($10,000)
Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan
Brief narrative/explanation/description: Funding will be used to purchase additional Wireless Access Points for replacement of faulty or new locations.

26: Hard Drives ($5,000)
Person Responsible: Charles Johnson & Randy Fournier LTR
27: Software Licenses and Apps ($5,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: Provide funding for software license renewal not eligible for educational funding. For example, Drive-shield. Also provide funding for MAC APPs for replacement of traditionally licensed software.

28: Scanner Replacement ($3,600)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: A number of printers are ageing and need replacing. This will allow for the replacement of printers each year.

29: Flash Drives ($1,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: Funding will be used to purchase flash drives for Faculty and Staff portable files.

30: Hard Drive Duplicator (14,000)

Person Responsible: Charles Johnson & Randy Fournier LTR
Planned Implementation Date: 07/01/17
Planned Completion Date: 06/30/18
Expected Source of Funds: Tech Plan

Brief narrative/explanation/description: Funding will be used to purchase Hard Drive Duplicator to re-image hard drives.
## Manassas Campus

### FY18 Campus Technology Plan

<table>
<thead>
<tr>
<th>Project/Activity</th>
<th>Amount</th>
<th>Start Date</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 IT Manager Support</td>
<td>$25,000</td>
<td>7/1/17</td>
<td>6/1/18</td>
</tr>
<tr>
<td>2 Lab Support</td>
<td>$40,000</td>
<td>7/1/17</td>
<td>6/15/18</td>
</tr>
<tr>
<td>3 Classroom technology upgrades</td>
<td>$30,000</td>
<td>7/1/17</td>
<td>2/28/18</td>
</tr>
<tr>
<td>4 Classroom lecterns</td>
<td>$24,000</td>
<td>7/1/17</td>
<td>2/28/18</td>
</tr>
<tr>
<td>5 Campus/Classroom cable upgrades</td>
<td>$15,000</td>
<td>7/1/17</td>
<td>5/28/18</td>
</tr>
<tr>
<td>6 Classroom/Theater projector bulbs</td>
<td>$3,000</td>
<td>7/1/17</td>
<td>12/30/18</td>
</tr>
<tr>
<td>7 SchoolVue Software</td>
<td>$900</td>
<td>7/1/17</td>
<td>2/28/18</td>
</tr>
<tr>
<td>8 Drive-shield Software</td>
<td>$2,500</td>
<td>7/1/17</td>
<td>2/28/18</td>
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<tr>
<td>9 Accudemia</td>
<td>$2,800</td>
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<td>2/28/18</td>
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<td>10 RegisterBlast</td>
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<td><strong>TOTAL</strong></td>
<td><strong>$145,200</strong></td>
<td><strong>7/1/17</strong></td>
<td><strong>2/28/18</strong></td>
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</tbody>
</table>

### NARRATIVE

**1. IT Manager Support**  
$25,000

Person Responsible: Lynn Bowers

**2. LAB SUPPORT**  
$40,000

Person Responsible: Lynn Bowers

Mon-Thurs/8:00 AM-9:30 PM, Fri 8:00AM -5:00 PM, Sat 8:00 AM - 4:30 PM

P-14’s provide assistance to the open computer lab, as well as other computer labs, and assist the campus tech staff on-and off campus. The individuals are aware that the hours of support are flexible. They work evenings and Saturdays when required.

Planned implementation date: 7/1/2017

Planned Completion date: 6/15/2018

Expected Source of Funds: College Technology Plan

**3. Classroom technology upgrades**  
$30,000

Person Responsible: Lynn Bowers

Planned implementation date: 7/1/2017

Planned Completion date: 2/28/2018

Instructional delivery will be enhanced and students will benefit from leading edge technology in the classrooms.

Expected Source of Funds: College Technology Plan

**4. Classroom lecterns**  
$24,000

Person Responsible: Lynn Bowers

Planned implementation date: 7/1/2017

Planned Completion date: 2/28/2018

New lecterns will provide the instructor with more space, and accommodate the technology that’s installed in the classrooms.

Expected Source of Funds: College Technology Plan
5. Classroom Cable Upgrades $15,000
Person Responsible: Lynn Bowers
Planned implementation date: 7/1/2017
Planned Completion date: 5/28/2018
Several classrooms have old and failing data cables. Other classrooms need to have the data cables moved to accommodate the re-configuration of the classrooms. Some offices need to have additional data and power cables installed or upgraded.
Expected Source of Funds: College Technology Plan

6. Classroom projector bulbs $3,000
Person Responsible: Lynn Bowers
Planned implementation date: 7/1/2017
Planned Completion date: 2/28/2018
Replacement projector bulbs are necessary to support the mounted projectors installed in the classrooms, computer labs, and conference rooms.
Expected Source of Funds: College Technology Plan

7. SchoolVue Software (Renewal) $900
Person Responsible: Lynn Bowers
Planned implementation date: 7/1/2017
Planned Completion date: 2/28/2018
Requested funding will be used to purchase SchoolVue management software to assist in classroom management, monitoring, and instruction.
Expected Source of Funds: College Technology Plan

8. Drive-shield Software $2,500
Person Responsible: Lynn Bowers
Planned implementation date: 7/1/2017
Planned Completion date: 2/28/2018
Requested funding will be used to maintain computer integrity so that changes made to a computer are removed upon system restart.
Expected Source of Funds: College Technology Plan

9. Accudemia Software (Renewal) $2,800
Person Responsible: Lynn Bowers
Planned implementation date: 7/1/2017
Planned Completion date: 2/28/2018
Requested funding will be used to purchase Accudemia software to assist in the tutor center reservations and data collection.
Expected Source of Funds: College Technology Plan

10. RegisterBlast Software (Renewal) $2,000
Person Responsible: Lynn Bowers
Planned implementation date: 7/1/2017
Planned Completion date: 2/28/2018
Requested funding will be used to purchase RegisterBlast management software to assist in testing center reservations and data collection.
Expected Source of Funds: College Technology Plan
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<thead>
<tr>
<th>Item</th>
<th>Project/Activity</th>
<th>Amount</th>
<th>Start Date</th>
<th>Completion Date</th>
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<td>IT Manager Support</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>2</td>
<td>Lab Support</td>
<td>$20000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>3</td>
<td>Funds for providing classroom technology upgrades or enhancements mid cycle to room refresh</td>
<td>$50000</td>
<td>7/1/17</td>
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<tr>
<td>4</td>
<td>Computer Refresh</td>
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<td>7/1/17</td>
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<tr>
<td>5</td>
<td>iPad Learning Lab 30 iPads refresh iPads in cart</td>
<td>$10000</td>
<td>7/1/17</td>
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<tr>
<td>6</td>
<td>Misc. Cabling Needs</td>
<td>$4000</td>
<td>7/1/17</td>
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<tr>
<td>7</td>
<td>Replacement Projection Screens as needed</td>
<td>$10000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>8</td>
<td>Software Licensing and Apps</td>
<td>$4000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>9</td>
<td>Technology refresh of conference rooms on campus</td>
<td>$25000</td>
<td>7/1/17</td>
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<td>10</td>
<td>Screen sharing technologies</td>
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<td>Wireless AV connection technologies</td>
<td>$5000</td>
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<td>12</td>
<td>Wi-Fi Upgrades as needed</td>
<td>$10000</td>
<td>7/1/17</td>
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<tr>
<td>13</td>
<td>Misc. lab and clinic technology support items</td>
<td>$100000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>14</td>
<td>Flat panel displays for digital signage or classrooms</td>
<td>$5000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>15</td>
<td>Scanners for campus, use with Image Now</td>
<td>$5000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>16</td>
<td>Headphones for various uses</td>
<td>$500</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<td>17</td>
<td>MacBook’s for Student Use, managed by LTR</td>
<td>$3000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>18</td>
<td>Power adapters and integrated USB chargers for desks in the library</td>
<td>$2500</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<td>19</td>
<td>Update collaboration technology He 355</td>
<td>$25000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<td>Podium maintenance items</td>
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<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>21</td>
<td>Demo the legacy coax video distribution system in server room due to obsolescence</td>
<td>$5000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td>22</td>
<td>Video wall Forum</td>
<td>$70000</td>
<td>7/1/17</td>
<td>6/30/18</td>
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<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>$534,600</strong></td>
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</tbody>
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*Item 1 IT Manager Support*  
Person Responsible: Wayne Ledford  
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: Campus Tech Plan
Provide funding for various maintenance items like bulbs, misc. wiring, cables, WiFi access points, and trial/pilot technologies.

Item 2 Lab Support $20,000
Person Responsible: Wayne Ledford/Kathleen Odige
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: Campus Tech Plan
Provide weekend support for Lab

Item 3 Technology Upgrades classrooms $50,000
Person Responsible: Lyle Fanelli
Planned implementation date: 7/1/17
Planned Completion date: 5/30/18
Expected Source of Funds: College Tech Plan
Provide upgrade classrooms to include control, cabling transition to digital from analog, document cameras and projectors. Many rooms are between refresh cycles, so any upgrades or enhancements will direct campus expense.

ITEM 4 Computer Upgrades $161000
Person Responsible: Wayne Ledford
Planned implementation date: 9/1/17
Planned Completion date: 12/30/18
Expected Source of Funds: College Tech Plan/ Central Funding
Provide funds to replace computers as part of the college refresh. Will refresh approximately 25% of all college computers

ITEM 5 IPAD LEARNING LAB $10000.00
Person Responsible: Wayne Ledford
Planned implementation date: 10/1/17
Planned Completion date: 10/30/18
Expected Source of Funds: Campus Tech Plan
Provide funding for refresh of 30 iPads in our iPad cart. Cart is used frequently by faculty in classrooms for various activities. The cart is now 5 years old. Cart will work with new version of iPads.

ITEM 7 Misc. Cabling Needs $4000
Person Responsible: Wayne Ledford
Planned implementation date: 10/1/17
Planned Completion date: 12/30/18
Expected Source of Funds: Campus Tech Plan
Provide funding for the infrastructure build out for additional wireless and wired drop capacity as needed.

ITEM 8 Replacement Screens $10000
Person Responsible: Wayne Ledford
Planned implementation date: 9/1/17
Planned Completion date: 5/30/18
Expected Source of Funds: Campus Tech Plan
Provide replacement projector screens for classroom projectors as classrooms are updated to digital systems, with 16:10 aspect ratio and high contract coatings. All free hanging screens have been replaced with modern 16:10 screens. The rest of the screens are hard mounted in fixed ceilings. They are 14 years old and damaged in many cases the rollers have failed. The replacement of these will require construction work to remove the fixed ceiling, patch the ceiling and paint. These have a high cost of replacement due to construction work.

Item 9 Software Licensing and Apps $4000
Person Responsible: Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/18
Expected Source of Funds: College Tech Plan
Provide funding for software license renewal not eligible for educational funding. For example, Drive-shield as well as School Vue for testing center. Also provide funding for MAC APPs for replacement of traditionally licensed software in the OCL.

Item 10 Screen sharing technologies $5000
Person Responsible: Lyle Fanelli, Wayne Ledford
Planned implementation date: 12/1/17
Planned Completion date: 12/30/2018
Expected Source of Funds: Campus Tech Plan
Provide funding for additional screen sharing technologies in classrooms and conference rooms. Recent faculty technology survey had a number of requests for additional screen sharing rooms at MEC.

Item 11 Wireless AV connection technologies $5000
Person Responsible: Lyle Fanelli, Wayne Ledford
Planned implementation date: 12/1/17
Planned Completion date: 5/30/2018
Expected Source of Funds: Campus Tech Plan
Fund the purchase of wireless AV connection technologies. This will allow for greater mobility of the teaching station since it will not be tethered by AV connection cables. Power only. Primary target locations are labs like the new OTA and SIM lab. The ‘Extron Sharelink’ in the student study rooms and conference room 218 are very popular for this.

Item 12 Upgrades to Wi-Fi as needed $10000
Person Responsible: Lyle Fanelli, Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
Fund additional Wi-Fi antennae for locations needing additional Wi-Fi coverage. This will be used to expand coverage to spaces where coverage is needed. Faculty and students are constantly requesting better coverage in locations.
Item 13  Misc. lab and clinic technology support items $100000
Person Responsible: Wayne Ledford, Nursing and Allied Health Deans
Planned implementation date: 9/1/17
Planned Completion date: 5/30/2018
Expected Source of Funds: Campus Tech Plan and college funding
Many teaching technologies at the MEC are very old. Specifically the ultrasound SIM, dental clinic chairs, and he Radiology equipment are 14 years old and badly need in updating. These funds will provide updated technologies and improved student learning experiences.

Item 14 Flat Panel Displays for digital signage or classrooms $5000
Person Responsible: Ruth Stanton
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
Provide for funding of locations which may need flat panels for Q less display or presentation of emergency notification information. These funds may also purchase flat panels for classrooms for video reinforcement or collaboration needs.

Item 15 Scanners for campus use and image now $5000
Person Responsible: Lyle Fanelli
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
Fund purchase of specific Fujitsu scanners required for interface with Image Now. IT consistently gets requests yearly for scanners to use with Image Now.

Item 16 Headphones for various students uses $500
Person Responsible: Andy Cornell, Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
Multiple requests for headphones associated with testing center, iPad use, and library use. Headphones are used consistently with iPads for respiratory therapy ‘breathe sounds’ labs. Student use over 12 months simply wears out headphones.

Item 17 MacBook’s for student use $3000
Person Responsible: Wayne Ledford, Acting Dean LTR
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
Fund purchase of MacBook’s for loan to students to use. This will increase the overall current MAC footprint of loaners to 6 from 4. They are very popular for use with students. Circulation numbers indicate high circulation and low availability due to demand. These funds will fund purchase of 2 additional MacBook’s.

Item 18 Power adapters and integrated USB chargers for desks $2500
Person Responsible: Lyle Fanelli, Acting Dean LTR
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
This funding will provide for the purchase of charging drop-ins for the quite study carols in the library. It will provide power for laptop use, as well as integrated USB chargers for students.

Item 19 update collaboration technology
Person Responsible: Lyle Fanelli, Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
This funding will provide for the purchase of updated control and switching to match the capabilities lost during the recent renovation of HE 355. Faculty requests for the return of the team monitor and sharing capability.

Item 20 Podium Maintenance items
Person Responsible: Lyle Fanelli, Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
This funding will provide for the purchase of replacement items to maintain the podiums in classrooms. These items will include racks for the AV mounting, shelves for document cameras which have been broken, mounting arms for the monitors as they wear out.

Item 21 Demo coax video distribution in server room
Person Responsible: Wayne Ledford, Lyle Fanelli
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
This funding will provide for the demolition of the ‘Blonder Tongue’ coax distribution system in the server room. The equipment is racked and no longer used. The equipment fills an entire rack and its removal will provide more space for new and current items.

Item 23 Video Wall for Forum
Person Responsible: Wayne Ledford
Planned implementation date: 7/1/17
Planned Completion date: 6/30/2018
Expected Source of Funds: Campus Tech Plan
This funding will provide for the purchase and installation of a video wall in the forum for presentations. The forum is often used for guest and student presentations. These funds will provide for 2x2 flat panels for display of presentations and college information. Also improved audio for the forum presentations as well.
### Woodbridge Campus
#### FY18 Campus Technology Plan

<table>
<thead>
<tr>
<th>Project/Activity</th>
<th>Amount</th>
<th>Start Date</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IT Manager Support</td>
<td>$10,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>2. Lab Support (OCL &amp; Digital Media Lab)</td>
<td>$69,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>3. Recurring Licenses &amp; Maintenance</td>
<td>$16,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>4. Computer Refreshes (64 iMacs\Desktops)</td>
<td>$64,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>5. Classroom or Computer Refresh Carryover</td>
<td>$120,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>6. Tutoring 3 Phase Signage and Repository Project</td>
<td>$25,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>7. Campus Projects</td>
<td>$30,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>8. AV campus Support</td>
<td>$16000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>9. iPad Project</td>
<td>$12000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>10. HVAC Lab Kits</td>
<td>$2000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
</tbody>
</table>

**THE FOLLOWING ITEMS MAY BE FUNDED WITH ETF FUNDS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Start Date</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>01. Computer and Classroom Refresh</td>
<td>$300,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>02. Tutoring Center 3 Phase Sinage and Repository Project</td>
<td>$3,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>03. AV Support</td>
<td>$16,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>04. Video Editing Kit</td>
<td>$11,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>06. Epson 4900 Printer</td>
<td>$3,000</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>07. AIR lab – heat pump and trainer</td>
<td>$30,116</td>
<td>7/1/17</td>
<td>6/30/18</td>
</tr>
<tr>
<td>08.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**TOTAL** $364,000 $363,116

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**1. Manager Support**
- Person Responsible: Rachel Overbey (ITM)
- Planned implementation date: 7/1/17
- Expected Source of Funds: Tech Plan
- Planned Completion date: 06/30/2017
- Funds will provide support for various small purchase items like bulbs, network infrastructure and various materials to support classrooms, labs and offices, etc.

**2. Open Computer, Digital Media and IT LAB SUPPORT**
- Person Responsible: Rachel Overbey / Kathy Bohnstedt
- Planned implementation date: 7/1/17
- Expected Source of Funds: Tech Plan
- Planned Completion date: 06/30/18

$ (10,000) $ (69,000)
3. Recurring Licenses & Maintenance  
   Person Responsible: Rachel Overbey, Paul Loving  
   Planned implementation date: 7/1/17  
   Expected Source of Funds: Tech plan  
   Planned Completion date: 6/30/18  
   This is software that the campus is using for license renewals for software such as Direct TV, SchoolVue, and our Digital Signage yearly renewals.

4. Computer Refresh of iMacs  
   Person Responsible: Rachel Overbey, Franklin Torres  
   Planned implementation date: 7/1/17  
   Expected Source of Funds: Tech Plan  
   Planned Completion date: 6/30/18  
   Extra Coverage of Faculty, Staff and Student iMacs that are up for replacement, and for additional Ram for Photo Lab and Video Editing. Will cover any additional computers not covered centrally.

5. Classroom Labs and Computer Refresh Carryover\Campus IT Projects  
   Person Responsible: Rachel Overbey, Franklin Torres  
   Planned implementation date: 7/1/17  
   Expected Source of Funds: Tech Plan  
   Planned Completion date: 6/30/18  
   These funds will be used to cover technology costs for our classrooms and labs that are not covered centrally to upgrade our enhanced classrooms this will also include the purchase of wireless presenters, printer refreshes, and to support the campus with other projects and request that we might have that are not centrally funded.

6. Tutoring 3 Phase Signage and Repository Project)  
   Person Responsible: Chris Stallings, Rachel Overbey, Paul Loving  
   Planned implementation date: 7/1/17  
   Expected Source of Funds: Tech Plan  
   Planned Completion date: 6/30/18  
   Brief Narrative: The separate phases of this project can be completed within different timeframes based on available resources but it must begin with Phase I, the digital interactive signage monitor with applicable software that will fill the needs designed by our tutoring services administrators. The integration of the interactive system with PeopleSoft and our signin process is a second step that would require the partnership of IT. The final phase of building a usable repository would also require the partnership of IT and the purchasing of iPads for the access of this information.  
   - Digital Interactive Signage Monitor (Qty. 1) -  
   - Integration of signage monitor with PeopleSoft and applicable signin software and card reader  
   - Creation of a database (repository) to house faculty educational materials  
   - iPads (Qty. 6)

7. Campus Projects  
   Person Responsible: Rachel Overbey, Paul Loving  
   Planned implementation date: 7/1/17  
   Expected Source of Funds: Tech Plan  
   Funds: (30,000)
Planned completion date: 6/30/18

Coverage for campus projects that may arise from office moves or classroom and lab computer or A/V equipment additions.

8. AV Support
   (16,000)
   Person Responsible: Rachel Overbey, Obed Sorto, Paul Loving
   Planned implementation date: 07/1/17
   Expected Source of Funds: Tech Plan
   Planned Completion date: 06/30/18
   To improve campus A/V equipment, maybe used to update DMS for DMPs on campus. Replacement of TVs that fail before their replacement cycle and are no longer under warranty. To cover other campus A/V request or projects.

9. Library iPad Project
   (12,000)
   Person Responsible: Rachel Overbey, Kerry Cotter, Paul Loving
   Planned implementation date: 7/1/17
   Expected Source of Funds: Tech Plan
   Planned Completion date: 6/30/18
   This project will use iPads to replace the current end panels for the library catalog. They are bulky and take up too much space. Students would benefit from something that is much smaller and easier to use.

10. HVAC Lab Kits
     (2,000)
     Person Responsible: Paul Loving, Jay Jensen
     Planned implementation date: Upon Arrival
     Expected Source of Funds: Tech Plan
     Planned Completion date: 06/30/18
     Brief Narrative: The wireless diagnostic service kits are needed for teaching troubleshooting methods in AIR 101 & 201 course.

ETF ITEMS

1. Classroom\Labs and Computer Refresh Carryover\Campus IT Projects
   $ (300,000)
   Person Responsible: Rachel Overbey, Franklin Torres, Paul Loving
   Planned implementation date: 7/1/17
   Expected Source of Funds: Tech Plan
   Planned Completion date: 06/30/18
   These funds will be used to cover technology costs for our classrooms and labs that are not covered centrally to upgrade our enhanced classrooms this will also include the purchase of wireless presenters, printer refreshes, and to support the campus with other projects and request that we might have that are not centrally funded.

2. Tutoring Center Signage TV
   (3,000)
Person Responsible: Chris Stallings, Rachel Overbey, Paul Loving
Planned implementation date: Upon Arrival
Expected Source of Funds: Tech Plan, ETF
Planned Completion date: 06/30/18

Brief Narrative: The separate phases of this project can be completed within different timeframes based on available resources but it must begin with Phase I, the digital interactive signage monitor with applicable software that will fill the needs designed by our tutoring services administrators. The integration of the interactive system with PeopleSoft and our signin process is a second step that would require the partnership of IT. The final phase of building a usable repository would also require the partnership of IT and the purchasing of iPads for the access of this information.

- Digital Interactive Signage Monitor (Qty. 1) -
- Integration of signage monitor with PeopleSoft and applicable signin software and card reader
- Creation of a database (repository) to house faculty educational materials
- iPads (Qty. 6)

3. AV Support
(16,000)
Person Responsible: Rachel Overbey, Obed Sorto, Paul Loving
Planned implementation date: 07/1/17
Expected Source of Funds: Tech Plan
Planned Completion date: 06/30/18

To improve campus A/V Equipment, maybe used to update DMS for DMPs on campus. Replacement of TVs that fail before their replacement cycle and are no longer under warranty. To cover other campus A/V request or projects.

4. Video Editing Kits
(11,000)
Person Responsible: Chris Stallings, Paul Loving
Planned implementation date: 10/15/16 – will be testing in the 2016 fall semester and fully implement in continuous projects (as noted above in the narrative) and semester classes in January, 2017.
Expected Source of Funds: Tech Plan, ETF
Planned Completion date: ongoing

Brief Narrative: Currently, the only lenses we have for our RED Epic camera are prime lenses which are good but they only hold one focal length and cannot be used to change focal length during a continuous shot. We need a professional cinema lens to compliment the beauty of the RED Epic camera.

- Tokina Cinema 50-135mm T3.0 with PL or Canon Mount
- OConnor O-Focus Dual Mini Photo Set
- Canon 7D bundle with case, media card and two lenses (18-135mm and 70-300mm)
- Other Pieces involved with the kit or video editing

5. Epson 4900 Printer (Photography)
(3,000)
Person Responsible: Gail Rebhan, Rachel Overbey, Paul Loving
Planned implementation date: 8/1/16
Expected Source of Funds: Tech Plan
Planned Completion date: ongoing
Brief Narrative: The Epson 4900 printer in room 106 broke. The printer’s warranty expired on September 25, 2015. NOVA purchased the printer in August 2014. The cost of repair could be as much as $2,879.

6. AIR lab / heat pump trainer
(30,116)

Person Responsible: Adam Johnson, Paul Loving

Planned implementation date: 7/1/17

Expected Source of Funds: ETF

Planned Completion date: 6/30/18

Brief Narrative: This equipment simulates a split system heat pump, which the instructor can use to
demonstrate the use of oil furnaces, electric furnaces, air handlers, and evaporator coil combinations.

Tech Plan: $364,000

ETF: $363,116

TOTAL TECH PLAN: $727,116
### Extended Learning Institute

#### FY18 Unit Technology Plan

<table>
<thead>
<tr>
<th>Project/Activity</th>
<th>Estimated Cost</th>
<th>Estimated Start Date</th>
<th>Estimated Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Smartermeasure</td>
<td>30,000</td>
<td>July 2017</td>
<td>June 2018</td>
</tr>
<tr>
<td>2 Virtual Conference Solution</td>
<td>120,000</td>
<td>September 2017</td>
<td>April 2018</td>
</tr>
<tr>
<td>3 24/7 Help Desk</td>
<td>125,000</td>
<td>July 2017</td>
<td>June 2018</td>
</tr>
<tr>
<td>4 Student Lingo webinars</td>
<td>7,000</td>
<td>July 2017</td>
<td>June 2018</td>
</tr>
<tr>
<td>5 Library databases/digital resources</td>
<td>85,000</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>6 Focus2 Software</td>
<td>1,000</td>
<td>July 2017</td>
<td>June 2018</td>
</tr>
<tr>
<td>7 Thinkstock</td>
<td>2,500</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>8 Smarthinking tutoring services</td>
<td>150,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>9 IT-related P14 staff</td>
<td>148,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>10 Lynda.com</td>
<td>1,500</td>
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<td>June 2018</td>
</tr>
<tr>
<td>11 IT Supplies</td>
<td>125,000</td>
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<td>June 2018</td>
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<tr>
<td>12 Quality Matters</td>
<td>25,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>13 Staff training</td>
<td>30,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>14 New Equipment</td>
<td>125,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>15 ProctorU Video Proctoring</td>
<td>200,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<td>16 Web Promotion Services</td>
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<td>June 2018</td>
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<td>17 Testing Web Cams</td>
<td>6,000</td>
<td>August 2017</td>
<td>March 2018</td>
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<tr>
<td>18 Student Services Call Center</td>
<td>9,500</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>19 Digital Signage</td>
<td>10,000</td>
<td>September 2017</td>
<td>December 2017</td>
</tr>
<tr>
<td>21 Recording Room Remodel</td>
<td>35,000</td>
<td>September 2017</td>
<td>March 2018</td>
</tr>
<tr>
<td>22 Virtual Computer Lab</td>
<td>125,000</td>
<td>January 2018</td>
<td>May 2018</td>
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<tr>
<td>23 App Programming Software</td>
<td>30,000</td>
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<tr>
<td>24 Network Drops</td>
<td>25,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>25 Useable Net and Accessibility Proj</td>
<td>25,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>26 Webcasts</td>
<td>5,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>27 Wireless mics</td>
<td>2,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>28 iPad Pros</td>
<td>10,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>29 Rasberry Pi Computers</td>
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<td>Oct 2017</td>
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<tr>
<td>30 Active Data Calendar</td>
<td>21,000</td>
<td>Sept 2017</td>
<td>Dec 2017</td>
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<tr>
<td>31 Phone Headsets for Call Center</td>
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<td>Sept 2017</td>
<td>June 2018</td>
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<tr>
<td>32 Internet Radio Phone Interface</td>
<td>5,000</td>
<td>Oct 2017</td>
<td>June 2018</td>
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<tr>
<td>33 Identity Verification Software</td>
<td>10,000</td>
<td>July 2017</td>
<td>June 2018</td>
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<tr>
<td>34 Virtual Lab Software</td>
<td>25,000</td>
<td>Oct 2017</td>
<td>June 2018</td>
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<tr>
<td>35 Virtual Lab Programming</td>
<td>100,000</td>
<td>Nov 2017</td>
<td>June 2018</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$1,681,000</strong></td>
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**NARRATIVE**

Item 1: Smartermeasure ($30,000)
Person Responsible: Jennifer Lerner/Cynthia Pascal
Planned implementation date/completion date: Renewed annually with contract running approximately July to June.
Expected source of funds: College
Narrative: Smartermeasure is an online tool to assess student readiness to take online courses. It is used for SSDL students, in ELI orientation for new online students, in ELI SDV courses, and made available for potential students considering ELI.

Item 2: Virtual Conference Software ($120,000)
Person Responsible: Jennifer Lerner/Susan Picard/Preston Davis
Planned implementation date: first event in September or October
Planned completion date: last event in April
Expected source of funds: College
Narrative: We have contracted with vendor Inexpo to hold virtual conference meetings for faculty professional development and for student orientation/student life events. Estimated pricing is approximately $30,000 per event. We plan to hold up to four events during this budget year, and the virtual conference center is open throughout the year.

Item 3: 24/7 Help Desk ($125,000)
Person Responsible: Jennifer Lerner/Susan Picard/Steve Sachs
Planned implementation date/completion date: contract runs entire fiscal year
Expected source of funds: College
Narrative: The college uses a vendor to provide 24/7 IT Help Desk Support. This support is particularly critical for online learners, and the 24/7 vendor provides support for ELI students for both IT questions and student services questions. The 24/7 help desk is also a service provided through our SSDL network to VCCS partner colleges. Because of our heavy use of the service, ELI funds part of the total college cost of the 24/7 help desk.

Item 4: Student Lingo webinars ($7,000)
Person Responsible: Cynthia Pascal
Planned implementation date/completion date: contract runs entire fiscal year
Expected source of funds: College
Narrative: Student Lingo is a vendor that provides on-demand student development webinars (topics include study skills, test-taking strategies, writing a resume, etc.). These webinars are part of ELI’s overall student development programming, parallel to workshops offered by student services departments on campus. The webinars are also used in ELI’s SDV courses as instructional materials.

Item 5: library databases/digital materials ($85,000)
Person Responsible: ELI Librarian, Heather Blicher
Planned implementation date/completion date: throughout the year, on the college’s collection development cycle
Expected source of funds: College
Narrative: Working with the college’s library staff, ELI funds a variety of online research databases and other digital materials to support our academic programs.

Item 6: Focus 2 career development software ($1,000)
Person Responsible: Christy Jensen/Cynthia Pascal
Planned implementation date/completion date: contract renewed annually, runs for fiscal year
Expected source of funds: College

Narrative: The Focus2 software is career development software used by ELI’s career counselor, the Pathway to the Baccalaureate program, and some campus career counselors to work with students on developing and pursuing their career goals. Cost stated reflects ELI’s portion of the cost, which is split with other units.

Item 7: Thinkstock licenses ($2,500)
Person Responsible: Susan Picard
Planned implementation date/completion date: licenses renewed annually
Expected source of funds: College
Narrative: Thinkstock is an image database used by the ELI instructional design staff, the ELI social media staff, and the ELI web design staff to acquire high-quality images (which can be used without violating copyright laws) for use in online courses, the ELI website, training websites/materials, and social media including Facebook and the Virtual Student Union.

Item 8: Smarthinking tutoring ($150,000)
Person Responsible: Preston Davis/Karen Kempter
Planned implementation date/completion date: licenses renewed annually, usage reviewed periodically during the fiscal year to determine actual usage and possible need to purchase additional hours
Expected source of funds: College
Narrative: ELI students need to have access to online tutoring services to support them in their ELI courses. Smarthinking tutoring services are provided to ELI students and to SSDL students. The service is purchased by the hour, and we typically use 200-300 hours of tutoring per month.

Item 9: IT-related P14 staff ($148,000)
Person Responsible: Jennifer Lerner, Susan Picard, Preston Davis
Planned implementation date/completion date: P14 staff work throughout the fiscal year
Expected source of funds: College
Narrative: ELI and Technology Training employ several P14 staff working on IT projects/tasks – a database specialist, an evening support person for faculty/student support in synchronous class meetings, a desktop support/faculty training specialist, a web design specialist, and a Blackboard help desk specialist. All but the web design specialist work 29 hours/week; the web design specialist works on projects on an as-needed basis.

Item 10: Lynda.com ($1,500)
Person Responsible: Susan Picard
Planned implementation date/completion date: annual licenses
Expected source of funds: College
Narrative: Lynda.com is an IT training resource used by ELI IT staff, ELI instructional design staff, Technology Training staff, and some faculty to learn additional skills on hardware and software products used in developing and supporting distance learning and instructional technology at the college. It is more cost effective than sending staff to outside training events because licenses can be rotated among users as needed and staff do not incur the cost and lost time related to traveling to training.

Item 11: IT supplies ($125,000)
Person Responsible: Sue Picard
Planned implementation date/completion date: as needed
Expected source of funds: College
Narrative: ELI and Technology Training combined have a staff of approximately 70, and most are heavy
technology users. ELI also provides workstations and IT rooms (e.g., recording rooms) for faculty. We have an ongoing need for IT supplies such as monitors, cabling, speakers, headphones, webcams, wireless mice and keyboards for training/presentations, still and video cameras, tablets and other mobile devices for training and demos, etc. Equipment standardization in ongoing, with targeted workstation configurations focused on docks, monitors and peripheral upgrades.

**Item 12: Quality Matters ($25,000)**

Person Responsible: Jennifer Lerner, Will Hatheway

Planned implementation date/completion date: annual membership; course review costs each fall and spring; training costs each summer, fall, and spring

Expected source of funds: College

Narrative: ELI is part of the VCCS consortium membership to Quality Matters, the nationally recognized organization setting standards for excellent online courses. The membership fee to the consortium is approximately $2000/year. ELI must pay $25/faculty member we train on the Quality Matters system, and we train approximately 90 faculty per year, for a total cost of $2,250. Ten to twelve ELI staff are QM certified and periodically have to take update training to maintain their certification; these trainings cost $0 to $500 each. Finally, QM evaluates and certifies courses with a QM seal at $1,000 per review, and ELI will run 10-15 of its best courses through this process in this fiscal year.

**Item 13: Staff training ($30,000)**

Person Responsible: Susan Picard, Preston Davis, Jennifer Lerner

Planned implementation date/completion date: ongoing throughout the year

Expected source of funds: College

Narrative: ELI and Technology Training staff need to engage in regular, high-quality training on new and changing hardware and software to be able to train college faculty and staff on the technologies they need to do their jobs. Training on such core products as Adobe products, Articulate and Captivate, various types of mobile solutions, and more is required for successful functioning in these jobs. Training funds cover professional training for more than 25 staff.

**Item 14: New Equipment ($125,000)**

Person Responsible: Susan Picard

Planned implementation date/completion date: ongoing throughout the year

Expected source of funds: College

Narrative: ELI needs to stay current with the latest version of mobile devices, accessibility solutions, alternative learning products, tablets, computers, and software/applications for development and delivery of online instruction; and, current equipment must continually be refreshed—especially Macs.

**Item 15: ProctorU Video Proctoring ($200,000)**

Person Responsible: Preston Davis

Planned implementation date/completion date: ongoing throughout the year

Expected source of funds: College

Narrative: Proctored tests are a required part of all ELI courses, and use of ProctorU takes pressure off campus testing centers and makes testing more accessible to all online students. ELI also plans to pilot test use of ProctorU in on campus computer labs at ELI expense.

**Item 16: Web Promotion Services ($60,000)**

Person Responsible: Jennifer Lerner

Planned implementation date/completion date: ongoing throughout the year
Expected source of funds: College

Narrative: In order to reach the adult learner, ELI engages in a variety of special web campaigns to build an identity for NOVA as a provider of online courses and one that provides a full service online program that can compete with the online University competitors.

Item 17: Testing Web Cams ($6,000)
Person Responsible: Preston Davis
Planned implementation date/completion date: August 2017-March 2018
Expected source of funds: College
Narrative: In an effort to further relieve pressure on campus testing centers at critical mid-term and final exam periods—especially on Saturdays—ELI will pilot test the use of ProctorU on campus to allow the campuses to use existing computer labs for testing more easily than by expanding current testing center processes. This would allow students to use ProctorU from campus, even if they could not do it from home.

Item 18: ELI Student Services Call Center ($9,500)
Person Responsible: Cynthia Pascal
Planned implementation date/completion date: July 2017 – June 2018
Expected source of funds: College
Narrative: The ELI Student Services uses a call-center system to effectively manage the volume, flow, and quality interactions our students and community expect. Annual recording licenses are required to monitor quality control and verify customer interactions. Wireless equipment and other peripherals are frequently replaced as needed. Planned upgrades this year include digital signage and additional recording licenses.

Item 19: Digital Signage ($10,000)
Person Responsible: Shelli Jarvis
Planned implementation date/completion date: September 2017-December 2017
Expected source of funds: College
Narrative: Pilot testing and implementation of interactive digital signage and kiosks throughout ELI’s Pender Dr. facility.

Item 20: Recording Room Remodel ($35,000)
Person Responsible: Susan Picard
Planned Implementation date/completion date: September 2017-March 2018
Expected source of funds: College
Narrative: With the installation of new security doors just outside of the current recording spaces, these spaces are no longer usable without remodeling and retrofitting to mitigate outside noise. Plan includes construction to consolidate the two rooms, install soundproofing, and upgrading furniture and computer equipment.

Item 21: Virtual Computer Lab ($125,000)
Person Responsible: Susan Picard
Planned implementation date/completion date: January 2018 – May 2018
Expected source of funds: College
Narrative: A virtual computer lab is needed for a variety of online classes. For example, Cyber Security class ITN 277 requires students to use forensic software to complete investigative assignments on computer systems. The virtual lab can provide multiple environments and configurations, all configured and separated from college networks. Students are thus able to perform administrative tasks on virtual systems without risk to the college networks. This environment could also be utilized by on-campus labs where reconfiguring
entire labs for specific classes is problematic. Funding includes purchasing the system hardware and hiring a contractor to manage the installation and configuration.

**Item 22: App Programming Software ($30,000)**
- Person Responsible: Preston Davis
- Planned Implementation date/completion date: July 2017-June 2018
- Expected source of funds: College
- Narrative: Modo Labs software license for the development of mobile apps to support online learning and other college projects.

**Item 23: Network Drops ($25,000)**
- Person Responsible: Susan Picard
- Planned Implementation date/completion date: July 2017-June 2018
- Expected source of funds: College
- Narrative: Cost of adding and moving network drops to support additional staff or new projects at Pender 4.

**Item 24: Useable Net Accessibility License and related projects ($25,000)**
- Person Responsible: Sue Picard
- Planned Implementation date/completion date: July 2017-June 2018
- Expected source of funds: College
- Narrative: Cost of Useable Net license and software to insure ELI website and materials are compliant with accessibility requirements.

**Item 25: Network Drops ($25,000)**
- Person Responsible: Susan Picard
- Planned Implementation date/completion date: July 2017-June 2018
- Expected source of funds: College
- Narrative: Cost of adding and moving network drops to support additional staff or new projects at Pender 4.

**Item 26: Webcasts ($5,000)**
- Person Responsible: Preston Davis
- Planned Implementation date/completion date: July 2017-June 2018
- Expected source of funds: College
- Narrative: Cost of technology-related webcast licenses for training.

**Item 27: Wireless Mics ($2,000)**
- Person Responsible: Susan Picard
- Planned Implementation date/completion date: July 2017-June 2018
- Expected source of funds: College
- Narrative: Replacement of wireless mics at Pender 4.

**Item 28: iPad Pros ($10,000)**
- Person Responsible: Sue Picard
- Planned Implementation date/completion date: July 2017-June 2018
- Expected source of funds: College
- Narrative: Purchase of iPads pros for development and testing as alternative to laptops for staff and student use.
Item 29: Raspberry Pi Computers ($1,000)
Person Responsible: Susan Picard
Planned Implementation date/completion date: Oct 2017-June 2018
Expected source of funds: College
Narrative: Purchase of Raspberry Pi computers for development and testing as low cost alternative for student use.

Item 30: Active Data Calendar Software ($21,000)
Person Responsible: Shelli Jarvis
Planned Implementation date/completion date: Sept 2017-June 2018
Expected source of funds: College
Narrative: License of software for managing room reservations at Pender and Brault.

Item 31: Phone Headsets for Call Center ($1,500)
Person Responsible: Susan Picard
Planned Implementation date/completion date: Sept 2017-June 2018
Expected source of funds: College
Narrative: Replacement and addition of phone headsets for staff at ELI call center, virtual advisors, and success coaches.

Item 32: Internet Radio Phone Interface ($5,000)
Person Responsible: Sue Picard
Planned Implementation date/completion date: Oct 2017-June 2018
Expected source of funds: College
Narrative: Hardware and software to allow ELI to produce live call in webinars that place callers on hold in the same manner as talk radio.

Item 33: Identity Verification Software ($10,000)
Person Responsible: Shelli Jarvis
Planned Implementation date/completion date: July 2017-June 2018
Expected source of funds: College
Narrative: Cost to license identity verification software used to prevent financial aid fraud among online learners.

Item 34: Virtual Lab Software ($25,000)
Person Responsible: Sue Picard
Planned Implementation date/completion date: Oct 2017-June 2018
Expected source of funds: College
Narrative: Licensing of software to allow creation of virtual science labs.

Item 35: Virtual Lab Programming ($100,000)
Person Responsible: Sue Picard
Planned Implementation date/completion date: Nov 2017-June 2018
Expected source of funds: College
Narrative: Programming and other support for the development of virtual science labs.
<table>
<thead>
<tr>
<th>Project/Activity</th>
<th>Estimated Cost</th>
<th>Estimated Start Date</th>
<th>Estimated Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 P-14 Producer/Director</td>
<td>$28,000.00</td>
<td>July 1, 2017</td>
<td>June 30, 2018</td>
</tr>
<tr>
<td>2 Producer(1), Engineer (1)</td>
<td>$158,000.00</td>
<td>July 1, 2017</td>
<td>June 30, 2018</td>
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<tr>
<td>3 Studio and Control Room Maintenance</td>
<td>$10,000.00</td>
<td>July 1, 2017</td>
<td>June 30, 2018</td>
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<tr>
<td>4 Master Control Upgrades/Maintenance</td>
<td>$40,000.00</td>
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<tr>
<td>5 Programming Licenses</td>
<td>$15,000.00</td>
<td>October, 2017</td>
<td>July, 2018</td>
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<tr>
<td>6 Software and Licenses</td>
<td>$15,000.00</td>
<td>July 1, 2017</td>
<td>June 30, 2018</td>
</tr>
<tr>
<td>7 Radio System Upgrade/Maintenance</td>
<td>$6,000.00</td>
<td>July 1, 2017</td>
<td>June 30, 2018</td>
</tr>
<tr>
<td>8 TV Center Equipment</td>
<td>$15,000.00</td>
<td>July 1, 2017</td>
<td>June 30, 2018</td>
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<tr>
<td>9 Commencement Production</td>
<td>$13,000.00</td>
<td>May, 2018</td>
<td>May, 2018</td>
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<tr>
<td>10 Misc. Parts/Office Supplies</td>
<td>$5,000.00</td>
<td>July 1, 2017</td>
<td>June 30, 2018</td>
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<tr>
<td>11 Streaming Services</td>
<td>$8,500.00</td>
<td>July 1, 2017</td>
<td>June 30, 2018</td>
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<td>12 Captioning</td>
<td>$20,000.00</td>
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<td>June 30, 2018</td>
</tr>
<tr>
<td>13 Master Control re-location</td>
<td>$200,000.00</td>
<td>June, 2017</td>
<td>January, 2018</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$533,500.00</strong></td>
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</tr>
</tbody>
</table>

**NARRATIVE**

**P-14 Producer/Director**

$28,000.00

Person Responsible: Charles Siegel

Planned implementation date: July 1, 2017

Planned Completion date: June 30, 2018

Expected Source of Funds: M&O

Brief narrative/explanation/description: Funding one 29/hr. per week Producer/Director Position for video production services

**Producer(1), Engineer (1)**

$158,000.00

Person Responsible: Charles Siegel

Planned implementation date: July 1, 2017

Planned Completion date: June 30, 2018

Expected Source of Funds: Cox Grant Account

Brief narrative/explanation/description: Funding one full-time Producer/Director for video services and funding one Engineer for TV Center support

**Studio and Control Room Maintenance**

$10,000.00

Person Responsible: John Stephenson

Planned implementation date: July 1, 2017

Planned Completion date: June 30, 2018

Expected Source of Funds: M&O Account

Brief narrative/explanation/description: Maintenance of Studio and Control Room facility
| Description                                      | Amount   | Person Responsible       | Planned Implementation Date | Planned Completion Date | Expected Source of Funds                        | Brief Narrative/Explanation/Description                                                                                                                                                                                                 |
|--------------------------------------------------|----------|--------------------------|-----------------------------|-------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
| Master Control Upgrades/Maintenance              | $40,000.00 | John Stephenson           | July 1, 2017                | June 30, 2018           | M&O/Cox Grant Account                         | On-going Master Control upgrades of servers and equipment required for the operation of the Cable TV station and Video On Demand Systems.                                                                                                                                  |
| Programming Licenses                             | $15,000.00 | Charles Siegel            | October, 2017               | July, 2018              | M&O/Cox Grant Account                         | Licensing of TV programs for the College Cable TV Station                                                                                                                                                                                                       |
| Software and Licenses                            | $15,000.00 | John Stephenson           | July 1, 2017                | June 30, 2018           | M&O                                           | Software Licensing for Master Control Operations, Audio creation, and Post-production                                                                                                                                                                                |
| Radio System Maintenance                         | $6,000.00  | Charles Siegel            | July 1, 2017                | June 30, 2018           | M&O                                           | Vendor contract to provide twice annual preventative maintenance. Cost of repair and/or replacement parts needed.                                                                                                                                                    |
| TV Center Equipment                               | $15,000.00 | Charles Siegel            | July 1, 2017                | June 30, 2018           | M&O/Cox Grant Account                         | Purchase or cost to repair production and post-production equipment at the Television Center                                                                                                                                                                       |
| Commencement Production                          | $13,000.00 | Charles Siegel            | May, 2018                   | May 2018                | M&O                                           | Rental of Video production Truck and services As well as Day-hire of two Camera operators for the production of College Annual Commencement ceremonies.                                                                                                               |
**Misc. Parts/Office Supplies**  $5,000.00

Person Responsible: John Stephenson
Planned implementation date: July 1, 2017
Planned Completion date: June 30, 2018
Expected Source of Funds: M&O
Brief narrative/explanation/description: Misc. cables/adaptors and Office Supplies

**Streaming Services**  $8,500.00

Person Responsible: John Stephenson
Planned implementation date: July 1, 2017
Planned Completion date: June 30, 2018
Expected Source of Funds: M&O
Brief narrative/explanation/description: Third Party Streaming Services for Live Streaming of Cable TV Channel and Live streaming of important college events.

**Programming Captioning**  $20,000.00

Person Responsible: John Stephenson
Planned implementation date: July 1, 2017
Planned Completion date: June 30, 2018
Expected Source of Funds: M&O/Cox Grant Account
Brief narrative/explanation/description: Captioning of programming for VOD and Cable TV

**Master Control Re-location**  $200,000.00

Person Responsible: John Stephenson
Planned implementation date: June, 2017
Planned Completion date: January, 2018
Expected Source of Funds: Cox Grant Account
Brief narrative/explanation/description: Re-location of Master Control including purchases of servers and equipment required for the operation of the Cable TV station and Video On Demand Systems in the new location.