

Form 1: Prioritized List of One-Time Budget Requests 2017-18

Division: Academic Affairs

Department/Unit: College of Engineering and Technology

Instructions: List all one-time budget requests in priority order. Complete and attach a *Justification: One-Time Budget Request* (Form 2) for each item listed.

Priority Number	Budget Request	Cost
1	CAT 221 and Belk 370 Classroom Computer Stations (24)	\$38,400
2	CAT 221 Displays for Instructor Projection	\$15,000
3	Automation Laboratory Upgrade	\$25,500
4	Instron 8801, 100 kN Capacity Dynamic Test Stand	\$195,000
5	Product Design Prototyping Equipment - Phase 1	\$49,000
6	Biltmore BSE Materials Laboratory Equipment	\$40,000
7	Belk 266a Projector Upgrade	\$15,000
8	Electrical Laboratory Upgrades	\$48,500
9	Biltmore BSE Electrical Laboratory Equipment	\$9,000
10	Belk 266a Reconfiguration	\$50,000
11	Power Laboratory Training Equipment	\$21,000
12	Distance Education Software	\$4,500
13	Product Design Prototyping Equipment - Phase 2	\$140,000
14	Polymer Lab Upgrade	\$125,000
	Total	\$775,900

**Form 2: Justification: One-Time Budget Request
2017-18**

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020 Vision: *Focusing our Future*. Justification narrative below must:

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
1	CAT 221 and Belk 370 Classroom Computer Stations (8)	5.4.1	\$38,400
Brief Justification:			
<p>The computers in these two labs are no longer under warranty and unable to support the campus Operating system and classroom software. This lab is used heavily for instructional and lab purposes that assist students in developing their potential which is in line with strategic direction 5.4.1 by improving technology that assists the students in learning. Additionally, the computers are connected to laboratory equipment for data collection and analysis. Failing to replace these computers will make these two labs obsolete and unable to be used for instruction purposes beginning Fall semester 2017.</p>			

VC Priority # _____

**Form 2: Justification: One-Time Budget Request
2017-18**

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
2	CAT 221 Displays for Instructor Projection	5.4.1	\$15,000
Brief Justification:			
<p>This room currently does not have a screen for instructors to share and demonstrate materials from their own computers. Instructors are having to bring in their own projectors and screens in order to teach in this lab. The cost covers four 65" display units, wireless control unit and facilities fees for wiring of data and power.</p>			

VC Priority # _____

**Form 2: Justification: One-Time Budget Request
2017-18**

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
3	Automation Laboratory Upgrade	1.1.1	\$25,500
Brief Justification:			
<p>OVERVIEW: Automation is of vital importance to all regional manufacturers. At the heart of these systems is often a Programmable Logic Controller (PLC) or robot. Graduate of the Engineering Technology programs are expected to be capable and proficient with this technology. Currently the lab has a collection of very old hardware and software. These are few in number and greatly limit the ability to teach an effective course. The proposed hardware and software will serve a number of courses including ET 349, ET 472, ENGR 400, and ENGR 450. Graduate students will also make use of this equipment in course and thesis work.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — There is very strong demand for graduates able to support automation in the manufacturing, service, and entertainment fields. Updating the capabilities of this equipment will ensure that our graduates obtain employment that adds to the economic health of the region.</p> <p>12 Siemens 1500 PLCs, IO modules, and software, \$15,000 COMPAQ NI DAQ Chassis Units \$7,500 Machining Simulation Software \$3,000</p>			

VC Priority # _____

Form 2: Justification: One-Time Budget Request 2017-18

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
4	Instron 8801 100 kN (22,500 lbs) capacity dynamic load system	1.1.2.5; 3.2.3	\$195,000
Brief Justification:			
<p>OVERVIEW: Purchase of the Instron dynamic load system will address multiple areas of the 2020 plan. Specifically, the system will help fulfill the educational needs of the state and region, enrich the student experience, support enhancing our external partnerships, and represent investment in our core resources. The requested material test stand is capable of cyclic fatigue testing. We currently do not have the cyclic fatigue capabilities in any WCU facility for educational and research purposes. Purchase of the dynamic test stand will allow our smaller static materials test stand to be relocated to our Biltmore Park facilities providing much needed infrastructure for the BSE program at Biltmore Park, specifically addressing needs in ENGR 201 (Statics), ENGR 202 (and the 211 lab) Mechanics of Materials. The ability to increase our facilities to include cyclic testing will enhance our opportunities to procure additional externally funded research and Rapid Center Projects. Cost includes all infrastructure requirements.</p> <p>INITIATIVE 1.1.2.5: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism.</p> <p>INITIATIVE 3.2.3: Develop the programs at Biltmore Park to position WCU as a key provider of graduate and professional programs in the greater Asheville-Hendersonville area along the I-26 growth corridor. Transfer of our static load stand to our BP site will allow greater collaboration with new industry partners such as the recently announced GF/Linamar project in Henderson county.</p>			

VC Priority # _____

Form 2: Justification: One-Time Budget Request 2017-18

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
5	Product Design Prototyping Equipment - Phase 1	1.1.1, 1.1.2, 1.1.3	\$49,000
Brief Justification:			
<p>OVERVIEW: The current manufacturing laboratory capabilities in the school are limited. The proposed equipment would expand the student abilities within the project based learning core, extracurricular projects, and undergraduate/graduate research. Students that use the equipment will possess knowledge and skills that are highly prized by local businesses.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — Many of our students work in manufacturing companies across Western Carolina and beyond. Example of companies that these students can support include Moog, Tektite, Alltec, Fluid Dynamics, and hundreds more.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — This purchase will help engineering students support the greater entrepreneurial community, develop new products, and share engineering capabilities with other disciplines on and off campus.</p> <p>INITIATIVE 1.1.2: Develop visionary strategic plans for each of the curricular focus areas through inclusive processes to accomplish the following: ..., Establish WCU as a hub of innovation, facilitating interdisciplinary connections among academic programs in such disciplines as business, the sciences, engineering, technology, and entrepreneurship and external collaboration with industry, start-up companies, research institutes, nonprofit organizations, and government agencies. — The purpose of the maker space is to prepare engineering students to be able to become inventors that serve many other segments of society and business.</p> <p>INITIATIVE 1.1.3: Position WCU as a preferred provider of graduate and professional programs in the greater Asheville Hendersonville area in fulfillment of its historic commitment to this vital part of the Western North Carolina region.</p>			

VC Priority # _____

Form 2: Justification: One-Time Budget Request 2017-18

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
6	Biltmore BSE Materials Laboratory Equipment	1.1.1, 1.1.3, 3.2.3	\$40,000
Brief Justification:			
<p>OVERVIEW: The facilities at Biltmore Park will support multiple new course offerings and larger class sections at the undergraduate and graduate levels. These courses include laboratory work required for professional practice. The items listed here will be housed in existing spaces and have the necessary technical support.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — The equipment will support economic development efforts in the greater Asheville-Hendersonville manufacturing corridor.</p> <p>INITIATIVE 1.1.3: Position WCU as a preferred provider of graduate and professional programs in the greater Asheville Hendersonville area in fulfillment of its historic commitment to this vital part of the Western North Carolina region. — Biltmore Park is in the center of a region underserved for engineering materials. UNC-A appears to be planning for additional engineering programs, potentially establishing leadership in advanced manufacturing education. Competition also exists from institutions two hours away, including those in bordering Tennessee counties.</p> <p>INITIATIVE 3.2.3: Develop the programs at Biltmore Park to position WCU as a key provider of graduate and professional programs in the greater Asheville-Hendersonville area along the I-26 growth corridor. — This equipment supports materials engineering courses that supply many local companies such a GE Aerospace, Borg-Warner, and Lutron. These will be used by undergraduate courses as the engineering and technology curriculum is expanded at Biltmore Park. Course numbers include ENGR 202, ENGR 211, ET 141, ET 332/333, ET 366, ET 420, ET 648,</p> <p>MAJOR PURCHASE ELEMENTS: Strain gages Load cells Polariscope (est. \$10,000) Heat treatment furnace Microscope (est. \$10,000)</p>			

VC Priority # _____

**Form 2: Justification: One-Time Budget Request
2017-18**

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
7	Belk 266a Projector	5.4.1	\$15,000
Brief Justification:			
<p>The projector in this room is outdated and no longer under warranty. This cost estimate would cover installing an upgraded wide-screen projector, screen, ability to wireless transmit from any device and necessary cabling (moving from analog VGA to a Digital HDMI connection from the instructor station)</p>			

VC Priority # _____

Form 2: Justification: One-Time Budget Request 2017-18

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
8	Electrical Laboratory Upgrades	1.1.1	\$48,500
Brief Justification:			
<p>OVERVIEW: Funds are required to upgrade a core electrical engineering laboratory. In total these will support curriculum revision, enhance lecture capabilities (4 Channel oscilloscope, video projectors, and tablets), and provided wider student access to modern hardware.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — The tools that support electrical and computer engineering are constantly evolving. This purchase would help our graduates stay abreast of needs by companies such as Moog Music, TekTone, Advanced Digital Cable, Traffic Safety Systems, and Nexus Technologies.</p> <p>MAJOR PURCHASE ELEMENTS: 2 Oscilloscopes with 4 channels and video output for lecturing \$20,000 2 Instructor tablets with video outputs (iPads + Connectors) \$900 6 Video projects (for upgrade) with wireless video capabilities \$3,600 RF communication components \$3,500 50 Altera digital trainer boards 50@\$189, \$9,500 24 Handheld DMMs @\$40, \$1,000 10 Global Specialties PB-505 LAB Analog Trainers, \$10,000</p>			

VC Priority # _____

Form 2: Justification: One-Time Budget Request 2017-18

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
9	Biltmore BSE Electrical Laboratory Equipment	1.1.1, 1.1.3, 3.2.3	\$9,000
Brief Justification:			
<p>OVERVIEW: The facilities at Biltmore park are being developed as a major part of the university strategic plan. New courses and larger class sections require the permanent addition of standard laboratory equipment. The items listed here will be housed in existing spaces and have the necessary technical support. The equipment will primarily support the Electrical engineering courses in the new Bachelors of Science in Engineering program.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — The equipment will support economic development efforts in the greater Asheville-Hendersonville manufacturing corridor.</p> <p>INITIATIVE 1.1.3: Position WCU as a preferred provider of graduate and professional programs in the greater Asheville Hendersonville area in fulfillment of its historic commitment to this vital part of the Western North Carolina region. — Biltmore Park is in the center of a region underserved for engineering. UNC-A appears to be planning for additional engineering programs, potentially establishing leadership in engineering education. Competition also exists from institutions two hours away, including those in bordering Tennessee counties.</p> <p>INITIATIVE 3.2.3: Develop the programs at Biltmore Park to position WCU as a key provider of graduate and professional programs in the greater Asheville-Hendersonville area along the I-26 growth corridor. — This equipment supports materials engineering courses that supply many local companies such a GE Aerospace, Borg-Warner, and Lutron. These will be used by undergraduate courses as the engineering and technology curriculum is expanded at Biltmore Park. Course numbers include ENGR 315, ENGR 332, and ENGR 350,</p> <p>MAJOR PURCHASE ELEMENTS: Digital Multimeter, 6½ Digit \$1,395.00 80W Triple Output Power Supply, 6V, 5A & ±25V, 1A \$1,413.00 Function / Arbitrary Waveform Generator, 10 MHz \$1,323.00 Oscilloscope: 100 MHz. 4 Channels Plus 8 Digital Channels \$3,061.00 Hot Air Re-work Station \$144.00</p>			

VC Priority # _____

**Form 2: Justification: One-Time Budget Request
2017-18**

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
10	Belk 266a Reconfiguration	5.4.1	\$50,000
Brief Justification:			
<p>The layout of this room is not conducive of learning. The students are forced to face away from the instructor, unable to see what is being taught. This cost covers replacing the furniture with newer, more modern furniture that allows for easier navigation and better ventilation for the computers. This cost would remove the "tiered" floor and arrange the computers for a better learning environment.</p>			

VC Priority # _____

**Form 2: Justification: One-Time Budget Request
2017-18**

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
11	Power Laboratory Training Equipment	1.1.1	\$21,000
Brief Justification:			
<p>OVERVIEW: Currently there are two power system trainers in the power laboratory. This extends the cycle of laboratory work rotation to two weeks. Adding a training systems would allow the students in the course to complete all lab work simultaneously, improving the student experience and pedagogy.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — The trainer will increase the ability of the department to meet the needs of electrical energy producers, distributors, and supporting industries. Some that fall in those categories include Duke Energy, Lutron, and the Tennessee Valley Authority.</p> <p>MAJOR PURCHASE ELEMENTS: 1 Lab Volt Power System Trainer</p>			

VC Priority # _____

Form 2: Justification: One-Time Budget Request 2017-18

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
12	Distance Education Software	1.1.1, 1.1.4	\$4,500
Brief Justification:			
<p>OVERVIEW: The distance education program is required to use facilities off the university campus and sites. This poses problems with certain software packages that are not available elsewhere. This request would provide licenses that may be installed at remote instruction sites to support these non-residential students.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — This purchase will help engineering students support the greater entrepreneurial community, develop new products, and share engineering capabilities with other disciplines on and off campus.</p> <p>INITIATIVE 1.1.4: Provide access to academic programs at off-campus sites in Western North Carolina within available resources and as dictated by data-based needs analyses. — The distance program serves students that are not able to attend WCU for distances and personal reasons. The program has been experiencing growth, and the growth is expected to continue.</p> <p>MAJOR PURCHASE ELEMENTS: Solidworks Labview Automation Studio</p>			

VC Priority # _____

Form 2: Justification: One-Time Budget Request 2017-18

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
13	Product Design Prototyping Equipment - Phase 2	1.1.1, 1.1.2, 1.1.3, 1.5.2, 1.6.2	\$140,000
Brief Justification:			
<p>OVERVIEW: Equipment is required to support Engineering in service of other programs in the university, support changing needs in the curriculum, and modernize existing facilities. These facilities will be added in two phases, phase A will use existing laboratory areas and designated spaces. Phase B will require rearranging laboratory spaces.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism. — This purchase will help engineering students support the greater entrepreneurial community, develop new products, and share engineering capabilities with other disciplines on and off campus.</p> <p>INITIATIVE 1.1.2: Develop visionary strategic plans for each of the curricular focus areas through inclusive processes to accomplish the following: ..., Establish WCU as a hub of innovation, facilitating interdisciplinary connections among academic programs in such disciplines as business, the sciences, engineering, technology, and entrepreneurship and external collaboration with industry, start-up companies, research institutes, nonprofit organizations, and government agencies. — The purpose of the maker space is to prepare engineering students to be able to become inventors that serve many other segments of society and business.</p> <p>INITIATIVE 1.1.3: Position WCU as a preferred provider of graduate and professional programs in the greater Asheville Hendersonville area in fulfillment of its historic commitment to this vital part of the Western North Carolina region. — Makerspaces are becoming standard fixtures on university campuses and one is needed to maintain parity in equipment and capabilities. Our curriculum and pedagogical techniques will set us apart from the other education options in the region.</p> <p>INITIATIVE 1.5.2: Expand the number of resident and distance summer school offerings for a wide variety of learners, including WCU students, guest students, senior citizens, B-12 students, and the general public; expand summer school enrollment by 25 percent by 2020. — This equipment will be used for K-12 activities, community sponsored projects, and professional outreach.</p>			

VC Priority # _____

**Form 2: Justification: One-Time Budget Request
2017-18**

Division: Academic Affairs

Department / Unit: College of Engineering and Technology

Instructions: One page per item listed on Form 1.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future*. Justification narrative below must:**

1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.

2) address outcomes from program prioritization and/or program, administrative, accreditation review.

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
14	Polymer Lab Upgrade	1.1.1	\$125,000
Brief Justification:			
<p>OVERVIEW: This equipment is reaching the end of the serviceable and relevant life cycle. It will need to be replaced in the near future. The equipment supports various undergraduate and graduate courses in Applied Systems Technology.</p> <p>INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism.</p> <p>— Plastics manufacturing is a part of many industries in the area. Advanced plastic processes are used in industries from health care to craft beer bottling. This purchase would help support industries such as Dynamic Systems Inc., Borg-Warner, Asheville Thermoform Plastics, Pinnacle Products International, and Plasticard Locktech International.</p> <p>MAJOR PURCHASE ELEMENTS: Injection molding machine \$80,000 Thermoforming machine \$32,000 Extruder \$10,000</p>			

VC Priority # _____

Form 3: Prioritized List of Recurring/Ongoing Budget Request 2017-18

Division: Academic Affairs

Department/Unit: College of Engineering and Technology

Instructions: List all recurring/ongoing budget requests in priority order. Complete and attach a *Justification: Recurring/ Ongoing Budget Request* (Form 4) for each item listed. Form originator should calculate and include fringe benefits of 22.97%. In addition, for each new 1.0 FTE, include \$5,471 for the employer portion of health insurance.

Priority Number	Budget Request	Cost
1	Full-Time Electrical Design Engineer	\$70,000.00
2	Mechanical Laboratory Supervisor	\$60,000.00
3	Matlab Site Licence - Annual Fee	\$15,000.00
Total		\$145,000

Form 4: Justification: Recurring/Ongoing Budget Request 2017-18

Division: Academic Affairs

Department/Unit:

Instructions: One page per item listed on Form 3.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future.* Justification narrative below must:**

- 1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.**
- 2) address outcomes from program prioritization and/or program, administration, accreditation review.**

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
1	Full-Time Electrical Design Engineer	1.1.1, 2.1.3	\$70,000

Brief Justification:

OVERVIEW: The Rapid Center serves as an enabler for economic development and growth in the region through engineering design, development and test for companies and entrepreneurs. With direct Rapid Center projects, academic Capstone projects, and partnerships with the colleges of Business, Arts and Sciences and Health Sciences, the Rapid Center supports over 150 clients per year. In 2012, the need for a full-time electrical engineer was identified to lead the electrical design of these projects, as well as provide mentoring and training to the staff and our students. In 2013, the Rapid Center hired a full-time electrical design engineer; however the position was not funded and the engineer's salary has been covered the last few years through lapsed salaries and the Director's endowment. To maintain stability in the Center, to meet external customer needs, and to satisfy deliverables on the U.S. Department of Commerce EDA grant, the Center's number one priority for recurring funds is to fund this position. The cost estimate includes fringe.

INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism.

INITIATIVE 2.1.3: Align, and where appropriate consolidate, academic support and experiential learning services to ensure consistent, interconnected, and efficiently provided assistance to students.

— At this point the support systems for the Mechanical laboratories is ad-hoc at best. This would ensure a richer consistent experience for students in the dependent programs.

VC Priority # _____

Form 4: Justification: Recurring/Ongoing Budget Request 2017-18

Division: Academic Affairs

Department/Unit:

Instructions: One page per item listed on Form 3.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020 Vision: Focusing our Future. Justification narrative below must:

- 1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.**
- 2) address outcomes from program prioritization and/or program, administration, accreditation review.**

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
2	Mechanical Laboratory Supervisor	1.1.1, 2.1.3	\$60,000

Brief Justification:

OVERVIEW: The School of Engineering + Technology in Cullowhee has approximately 500 students in five programs. These students are required to use spaces, equipment, and materials in the regular course of homework, laboratory, and project work. The laboratory spaces span three floors of the Belk Building, and two floors of the CAT building. These laboratory spaces are divided into Mechanical and Electrical focuses, two very different disciplines. A laboratory supervisor serves many functions. Most importantly they are the primary coordinator for all issues related to safety, facilities, equipment, and supplies. Normally schools would have at least one laboratory supervisors for each of the laboratory types. At this point the Electrical laboratories are overseen by Jerry Denton. His position is 1/2 FTE as instructor and 1/2 FTE as laboratory support. When possible he supports the Mechanical laboratories. Most of the safety, upkeep, and supervision of the laboratory is done by graduate students. The current level of Mechanical laboratory supervision is having a negative effect on the student access the the laboratory spaces and limiting what instructors may do. The Mechanical Engineering concentration is the largest growth area in the College of Engineering and Technology. A new dedicated mechanical laboratory supervisor would bring us closer to a 75% staffing level and help maintain the quality of the growing mechanical concentration.

INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism.

— This person addresses the need for more technical education in the region for industries that employ graduates from the BSE Mechanical Concentration and Engineering Technology programs. As numbers in these programs grow this position will become ever more important to maintain safety and ensure laboratory access for student experience.

Initiative 2.1.3: Align, and where appropriate consolidate, academic support and experiential learning services to ensure consistent, interconnected, and efficiently provided assistance to students.

— At this point the support systems for the Mechanical laboratories is ad-hoc at best. This would ensure a richer consistent experience for students in the dependent programs.

VC Priority # _____

Form 4: Justification: Recurring/Ongoing Budget Request 2017-18

Division: Academic Affairs

Department/Unit:

Instructions: One page per item listed on Form 3.

Each justification MUST link to at least one specific strategic initiative from the WCU Strategic Plan, 2020

***Vision: Focusing our Future.* Justification narrative below must:**

- 1) include a brief statement of how the request advances or fulfills the strategic initiative(s) identified.**
- 2) address outcomes from program prioritization and/or program, administration, accreditation review.**

Priority Number	Budget Request	Strategic Initiative(s) Number (e.g. 3.1.2)	Cost
3	Matlab Site License - Annual License Cost	1.1.1	\$15,000

Brief Justification:

OVERVIEW: The Matlab software package and programming language is used in many areas of engineering, math, and science. A site license would provide access to various specialty tool boxes, expand student access, and establish it as a common curriculum computing tool.

INITIATIVE 1.1.1: Undertake a rigorous and inclusive process to prioritize all undergraduate and graduate programs based on universally applied criteria, including quality, regional need, demand, enrollment trends, retention and graduation rates, and alignment with the University mission and the following integrated curricular focus areas: creative arts, education, environment, health, innovation and technology, and recreation and tourism.

— The advanced nature of the work done with Matlab will support high tech industries. The Buncombe Economic Development Coalition has identified 5 target clusters: Advanced Manufacturing; Science and Technology; Healthcare; Arts & Culture; and, Entrepreneurship. The software directly supports alumni working in companies doing work in Advanced Manufacturing and Science and Technology.

VC Priority # _____