

3	<p>LCD Projector Usage: Outdoor Projection System 3LCD, 3-chip technology USAGE: PORTABLE OUTDOOR includes: Wifi dongle (if not built-in) Power adapter VGA Cable Remote control with battery Lens cap Carrying case User guide Tripod screen</p> <p>LCD Panel: 5.9-inch with MLA (D8) OPTICAL Zoom: 1.2 (Optical Zoom) Screen Size: 60" to 300" [0.67 to 6.81 m] (Zoom:Wide) 30" to 300" [0.80 to 8.18 m] (Zoom:Tele) Projection Distance: 60" screen 1.35 - 1.62 m Throw Ratio: 0.4 (Zoom:Wide), 1.26 (Zoom:Tele) Projection Lens F Number: 5.8-1.7 Projection Lens Focal Length: 13.52mm-16.22mm Focus Method: Manual Focus Offset: 0:1</p>	2	
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	<p>(Item 3 LCD Projector continuation)</p> <p>IMAGE Colour Light Output 2,600 Lumens White Light Output 2,600 Lumens Resolution : WXGA Native Aspect Ratio : 16:10 Contrast Ratio: 2,000:1 Lamp Hours Normal/Eco: 4,000/4,000 Hours Lamp Type 205 W UHE (E-TORL) Keystone Correction Vertical : -45 degrees to +45 degrees Horizontal: -30 degrees to +30 degrees Colour Reproduction Up to 1.07 billion colours Colour Processing 10 bit</p> <p>CONNECTIVITY Input: Video 1 x RCA (Yellow), 1 x Component (via D-sub 15-pin) Input: Computer 1 x D-sub 15-Pin (RGB), 1 x USB 2.0 type B Input: USB Memory Device 1 x USB 2.0 type A Input: Three-In-One USB Display 1 x USB 2.0 type B Input: Digital 1 x HDMI Input: Audio 1 x Stereo mini jack, 1 x HDMI Input: Control 1 x USB 2.0 type B Wireless Connectivity: Yes</p>		
4	<p>Interactive Pen Display Pen and Tablet 13:3HD Display (1920x1080) with wide viewing angle, pressure (2048 levels) and tilt sensitive pen with 3-position display stand and with 3in1 cable for PC and MAC, comfortable, compact, lightweight design With installer/user guide</p>	6	
5	<p>Interactive White Board 79" Dual touch, 4x3 aspect ratio, multi touch interactive whiteboard, software included (for conference room) with minimum 1 year warranty With installer/user guide</p>	1	

<p>6</p>	<p>Short Throw Projector Projector with Projector Screen, ceiling mount brackets and includes installation.</p> <p>LCD: Size: 0.67" (D10, C2fine) Native Resolution WUXGA</p> <p>Projection Lens: Type Optical Zoom (Manual) / Focus (Manual) F-Number: 1.50 - 1.71 Focal Length: 20.42 - 24.50 mm Zoom Ratio: 1.0 - 1.2 Throw Ratio: 1.38 - 1.68 (Wide - Tele)</p> <p>Lamp Type: 200W UHE Life (Normal/Eco)**: 5,000 hours / 10,000 hours</p> <p>Brightness** Colour Light Output:3,200lm Contrast Ratio 15,000:1</p> <p>Connectivity Analog Input D-Sub 15 pin 1 (Blue molding) Composite RCA x 1 (Yellow)</p>	<p>8</p>	
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<p>(Item 6 Short Throw Projector)</p> <p>Digital Input HDMI: 2 (1 supports MHL) Audio Input: 2 RCA (White/Red)</p> <p>USB Interface USB Type A:1 (for USB Memory, Document Camera, Firmware Update) USB Type B:1 (for USB Display, Mouse, K/B, Control, Firmware Update)</p> <p>Network Wireless: Built in Wireless Specifications Supported Speed For Each Mode*3 IEEE 802.11b: 11 Mbps, IEEE 802.11g: 54 Mbps, IEEE 802.11n: 130 Mbps Wireless LAN Security WPA-PSK/WPA2-PSK(TKIP/AES), WPA2-PSK(AES) Supported Connection Mode Infrastructure, Access Point</p>		
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<p>7</p>	<p>Projector with Projector Screen, ceiling mount brackets and includes installation.</p> <p>LCD: Size: 0.67" (D10, C2fine) Native Resolution WUXGA</p> <p>Projection Lens: Type Optical Zoom (Manual) / Focus (Manual) F-Number: 1.50 - 1.71 Focal Length: 20.42 - 24.50 mm Zoom Ratio: 1.0 - 1.2 Throw Ratio: 1.38 - 1.68 (Wide - Tele)</p> <p>Lamp Type: 200W UHE Life (Normal/Eco)**: 5,000 hours / 10,000 hours</p> <p>Brightness** Colour Light Output:3,200lm Contrast Ratio 15,000:1</p>	<p>2</p>	
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<p>(Item 7 Projector continuation)</p> <p>Connectivity Analog Input D-Sub 15 pin1 (Blue molding) CompositeRCA x 1 (Yellow)</p> <p>Digital Input HDMI: 2 (1 supports MHL) Audio Input: 2 RCA (White/Red)</p> <p>USB Interface USB Type A:1 (for USB Memory, Document Camera,Firmware Update) USB Type B:1 (for USB Display, Mouse, K/B, Control, Firmware Update)</p> <p>Network Wireless:Built in Wireless Specifications Supported Speed For Each Mode*3 IEEE 802.11b: 11 Mbps, IEEE 802.11g: 54 Mbps, IEEE 802.11n: 130 Mbps Wireless LAN Security WPA-PSK/WPA2-PSK(TKIP/AES), WPA2-PSK(AES) Supported Connection Mode Infrastructure, Access Point</p>		
Lot 9- Server		

1	Server 1U Rack Server Intel Xeon E5-2620 v3 2.4Ghz Intel C610 15MB Cache 16GB DDR4-2133/PC4-17000 Serial ATA/600 6Gb/s SAS Controller 2 X 600GB SAS 6Gb/s 2 gigabit ethernet Memory card supported: microSD Max turbo speed: 3.20GHz Network (RJ45): yes 1 PCI express x16 slots 1 PCI express x8 slots 2 processors supported 2 expansion slots 24 total memory slots 5 USB 3.0 ports 8GT/s quickpath interconnect Remote management WEEE With VGA, USB2.0 and DVD-ROM	1	
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2	Rack Server Processor: Intel Xeon E5-2640 v3 2.6GHz, 20M Cache, 8.00GT/s QPI, Turbo, HT, 8C/16T (90W) Max Mem 1866MHz Memory / Max: 2 x 8GB RDIMM, 2400MT/s, Single Rank, x8 Data Width HD Capacity: 4 x 1TB 7.2K RPM NLSAS 6Gbps 2.5in Hot-plug Hard Drive, 3.5in HYB CARR (max 8 HDD) Optical DVD+-RW, SATA, Internal RAID: RAID 1 for H330/H730/H730 (2 HDDs or SSDs) RAID: PERC H730 Integrated RAID Controller, 1GB Cache Server Management: iDRAC8 Enterprise, integrated Dell Remote Access Controller, Enterprise Onboard NICs On-Board LOM 1GBE (Dual Port for Towers, Quad Port for Racks) Power Supplies: Single, Hot-plug Power Supply (1+0), 750W Static Rail: ReadyRails Sliding Rails With Cable Management Arm Warranty: 3 years warranty NBD with onsite full support After Sales Service: includes setup and installation	1	
Lot 10- Architecture Laboratory			
1	Branded Desktop Computer Operating System: Windows 10 Processor: Intel Core i7 6th Gen RAM: 8GB or higher storage: 1TB HDD 72000 RPM Graphics: at least 2GB or 4GB ddr5 video/graphics card Super multi-drive Integrated HD 5.1-channel surround sound WLAN 802.11b/g/n wireless LAN and Bluetooth 4.0 LE LAN Gigabit Ethernet F/S I/O Ports: D-Sub port(s), HDMI port(s), LAN port(s), Audio jack(s), USB 2.0 port(s) Accessories: Keyboard, mouse, speakers Software: (Perpetual License) MS Office Home and Business 2016 with anti virus	30	
2	3kVA UPS	1	
3	Fabricated computer tables Includes power and network	30	

4	Ergonomic Computer Chairs	30	
5	Projector Wireless At least 3200 lm Ceiling mounted Power-on and off through switch With VGA and HDMI connection	1	
6	Structured cabling For 30 computers Includes but not limited to: 2 units layer 2 manageable switch 1 unit 24 ports patch panel	1	
7	Setup and installation Layout: See <i>Lot 11 Item 7 Computer Lab Plan.JPG</i> Computer table and chairs setup Computers and accessories setup Installation and activation of software Setup and installation of projector Other necessary networking and electrical wiring requirements	1	
8	Warranty At least 1 year on hardware		
Lot 11- Communication Arts Laboratory			

1	Branded Desktop Computer 15 units All-in-one Display: 21.5-inch 3.3GHz quad-core Intel i5 turbo boost up to 3.1GHz 8Gb onboard memory (configurable to 16GB) 1TB (54000 RPM) Hard drive Intel Iris Pro Graphics 6200 Display 4096x2304 resolution Operating System included Software: (<i>Perpetual license</i>) Microsoft Office Home and Business (for 15 units) Accessories: keyboard, mouse	1	
2	Computer table Design: See attached <i>Lot 11 Item 2 Computer Table Design.pdf</i> Inclusive of network and power cabling and installation		
	Warranty At least 1 year on hardware		
Lot 12- Econometrics Laboratory			
1	Laptop OS: Windows 10 SL Processor: Intel Core i7 Memory: 8GB Storage: 1TB 3.5" 7200 RPM HD Graphics Super multidrive Integrated HD audio 5.1 channel surround sound Connectivity: WLAN 802.11b/g/n wireless LAN and Bluetooth 4.0 LE LAN Gigabit Ethernet F/S I/O Ports: D-Sub port(s), HDMI, LAN port(s), Audio jack(s), USB3.0 port(s) Rear I/O Ports: D-sub port(s), HDMI-port(s), LAN port(s), Audio jack(s), USB2.0 port(s) Accessories: USB Keyboard, mouse, speakers Approximately 15" LED display Software: MS Office Home and Business 2016(Perpetual)	15	

2	Computer table Design: See attached <i>Lot 12 Item 2 Computer Tables.doc</i> Dimension: (1.36 x .61m); Room dimension: 37sqm Fabricated, wooden finish With network and power provisions Inclusive of network and power cabling and installation	14	
3	Wireless Network access point specifications: 3x3 MIMO; 2.4GHz (450 Mbps max rate) & 5GHz (1.3 Gbps max rate) radios; 6 integrated omni-directional antennas; virtual controller technology; must be compatible with ARUBA Controller 7205	1	
4	Warranty and Service Includes quarterly maintenance for 3 years Next business day temporary service unit replacement of defective units	1	
Lot 13-Software – Citation Software			
1	Bibliographical, Citation, and referencing	1	
Lot 14-Software – Office Use			
1	Desktop Publishing Software	3	
2	Microsoft Project Standard 2016 64 bit (latest model)	15	
3	MS Office Professional	3	
Lot 15- Software – Plagiarism Detection			
1	Subscription Turnitin Online Plagiarism Detection / Originality Checking Software 5 years Instant formative feedback on faculty/student writing, online checking, online feedback and grading summative assessment of faculty/student writing	1	
Lot 16-Software – Data Analysis			
1	NVIVO 11 Qualitative Data Analysis Software for Social Sciences	2	

2	SPSS Quantitative Data Analysis Software for Social Sciences with training	3	
Lot 17- Software – Video Editing			
1	Video Editing Software	1	
Lot 18-Software – Mathlab			
1	Mathlab Software with optimization toolbox image processing toolbox statistics and machine learning toolbox global optimization toolbox	5	
Lot 19- Software – STATA			
1	STATA 14 IC-10 User student lab license for windows, perpetual license	1	
2	STATA 14 IC-5 User Academic License for Windows, perpetual license	1	

<p>3</p>	<p>STATA 14 Detailed Specifications</p> <p>STATA 14 PDF Documentation Set (Includes the following PDF documentation) Getting Started with Stata for Windows Getting Started with Stata for Mac Getting Started with Stata for Unix</p> <p>User's Guide Base Reference Manual Data-Management Reference Manual Graphics Reference Manual Functions Reference Manual New</p> <p>Subject-specific statistics reference manuals: Bayesian Analysis New Item Response Theory New Longitudinal-Data/Panel-Data Multilevel Mixed-Effects Multiple-Imputation Multivariate Statistics Power and Sample-Size Structural Equation Modeling Survey Data Survival Analysis Time Series Treatment Effects</p> <p>Programming reference manuals:</p>		
<p>Lot 20- SOM IT Equipment & Peripherals</p>			

1	Monitor 23" LED monitor aspect ratio - 16:9 contrast ratio static - 3000:1 resolution - 1920x1080 viewing angle (H/V) - 178°/178° OS Compatibility - Windows, Mac Accessories - HDMI & VGA cables for laptop connection	12	
2	USB Mouse with mouse pad, USB Keyboard	15	
3	UPS at least 500 VA	15	
4	Portable Hard drive 2 TB, USB 3.0 no external power needed no software install no configuration	4	
5	Branded Desktop Computer Operating System: Windows 10 Processor: Intel Core i7 Memory: 8GB Storage: 1TB 3.5-inch 7200RPM Graphics: HD Optical Drive: Super-Multi drive Audio: Integrated high-definition, 5.1-channel surround sound Connectivity: WLAN 802.11b/g/n wireless LAN and Bluetooth 4.0 LE LAN Gigabit ethernet F/S I/O Ports: D-Sub port(s), HDMI-port(s), LAN port(s), audio jack(s), USB2.0 port(s) Accessories: USB Keyboard, mouse and speakers Display: 22" LED Software: Microsoft Office Home and Business 2016(perpetual)	3	

6	<p>UPS 1KVA Back UPS Output Power Capacity: 600 Watts / 1000 VA Nominal Output Voltage: 230V Output Connections: (2) IEC 320 C13 (Surge Protection), (6) IEC 320 C13 (Battery Backup) Nominal Input Voltage: 230 V Input Frequency: 47 - 63 Hz +/- 3 Hz Battery Type: Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof (RBC32) Typical Recharge / Backup time: 15 hour recharge time, 16.6min half load 300w, 5.9min full load 600w Control Panel: LED status display with On Line : On Battery : Replace Battery and Overload indicators Audible Alarm: Alarm when on battery : distinctive low battery alarm : overload continuous tone alarm DataLine Protection: USB Port / RJ-11 Modem/Fax/DSL protection (two wire single line),RJ45 10/100 Base-T Ethernet protection Surge Energy Rating: 180 Joules</p>	3	
7	<p>Smart TV 60" UHD Flat; can access Skype & Youtube, w/ wireless LAN Built-in Resolution: 3840 x 2160 Ultra clear panel HD Audio Connectivity: HDMI, USB, Composite in, Digital Out Audio: Dolby Digital Plus Accessory: mini wall mount support With installation to SOM rooms</p>	2	

8	LCD Projector 3LCD Technology RGB liquid crystal shutter projection system Native resolution: WXGA Wireless LAN Brightness: 3200lm Throw ratio: 1.30-1.56 (wide-Tele) Life (Normal/Eco): 5,000hrs/10,000hrs Screen Size: 33"-320" Contrast ratio: 15,000:1 Connectivity: Composite, S-Vidio, HDMI, USB Warranty: 3 years on parts; 1 year on lamp or 1000hrs whichever comes first	3	
Lot 21-Laptop			
1	LAPTOP COMPUTER 15.6" 16:9HD Processor: Intel Core i7-5500U 2.4 GHZ Processor (4M Cache, up to 3.00GHZ) Operating System: Windows 10 Memory: 4GB DDR3L 1600MHz SDRAM Storage: 1TBHDD Optical Drive: Super-Multi DVD Card Reader: 3in1 card reader (SD/SDHC/SDXC) Software Inclusion: (Perpetual License)OS Windows with Microsoft Office Home and Business 2016 edition & Internet Security/Virus Scanner Accessories: laptop bag/Backpack, wireless mouse, Headset, HDMI connector for projector	22	

2	<p>Laptop <i>Usage: Outdoor</i> <i>Processor: Intel i5 Processor (5th gen), 2.2GHz or better</i> <i>Memory: at least 4GB</i> <i>Hard drive: 1TB HDD + 16GB SSD</i> <i>Screen size: approx. 14"</i> <i>Display: LED, antiglare</i> <i>Resolution: FHD</i> <i>Video: Integrated HD Graphics 5500</i> <i>Audio: High definition</i> <i>Operating System: Windows 10 64bit</i> <i>Bluetooth: Dual Band wireless-AC + Bluetooth 4.0</i> <i>Webcam: HD capable</i> <i>Microphone: dual array</i> <i>Ports: VGA, miniDP, USB, Integrated Smart Reader, mic/headphone combo, RJ45, FPR, 14-in-1 card reader</i> <i>Super multi-drive DVD, card reader</i> <i>Battery: 3 cell front and 3 cell rear</i> <i>Accessories: headset with microphone, laser pointer/presenter</i> <i>Ruggedness and durability tested against high pressure, humidity, vibration, dust, etc</i> <i>Other inclusions: MS Office Home and Business 2016</i> <i>Portable external DVD RW Drive</i></p>	5	
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3	<p>Laptop 15.6" LED ant glare FHD Processor: Intel Core i5 processor (5th gen), 2.2GHz or better 1TB HDD Operating System: Windows 10 Memory: at least 4GB Optical Drive: Super-multi DVD Video: Integrated HD Graphics 5500 Audio: High definition Bluetooth: Dual band wireless-AC + Bluetooth 4.0 Webcam: HD capable Microphone: dual array Ports: VGA, miniDP, USB, Integrated Smart reader, mic/headphone combo, RJ45, FPR, 14-in-1 card reader Battery: 3-cell front and 3 cell rear Software inclusion: Microsoft Office Home and Business 2016 edition</p>	3	
4	<p>Laptop <i>Usage: Office productivity</i> Processor: Intel i3 Processor Memory: at least 4GB Hard drive: at least 500GB HDD Screen size: approx. 14" Display: LED Resolution: FHD Audio: High definition Operating System: Windows 10 64bit Integrated LAN: fast ethernet, WLAN+Bluetooth 4.0 Ports: Full Size HDMITM 1.4a (2) USB 3.0 (1) USB 2.0 (1) VGA Super multi-drive DVD, card reader Battery: 24 Whr Accessories: Mouse, other accessories</p>	1	

5	<p>Laptop 13.3-inch (diagonal) LED-backlit Retina display 3.1GHz dual-core Intel Core i7 processor Turbo Boost up to 3.4GHz Up to 10 hours battery life1 Up to 1TB SSD2 Force Touch trackpad 1.58 kg (3.48 pounds) Additional accessories: VGA Adaptor for projector USB 3.0 to Ethernet Adaptor HDMI connector for projector USB Optical Mouse Headset</p>	2	
6	<p>Laptop Intel Core i7-6700HQ Quad Core 6M Cache, up to 3.5 GHz Hard Drive: 500 SSD RAM Included: 16 GB DDR4 SDRAM, 2133 Mhz RAM Slots: 2 DIMM Slot(s) Release OS Version : Windows 10 Screen Size: 15.6 inch (Touch Screen) Pixel Density: 282 PPI Display Technology: IGZO Resolution: 3,840 x 2,160 Pixels Aspect Ratio: 16:9 Graphics Card: NVIDIA GeForce GTX 960M Audio Features: Waves MaxxAudio Pro Battery Type: Lithium Ion (Li-Ion) Battery Details: 6-Cell Lithium-Ion 84 Whr Measurements: 14.06 in. x 9.27 in. x 0.66 in. Wireless Connectivity: DW1830 3x3 802.11ac 2.4/5GHz + Bluetooth 4.1 A/C Adapter: 130W AC adapter</p>	3	

(Item 6 Laptop)
 Ports: 1 HDMI
 2 USB 3.0 with PowerShare
 1 Kensington Lock slot or Noble Lock
 1 SD card reader (SD, SDHC, SDXC)
 1 Headphone Output
 1 Thunderbolt™ 3 Supports:
 Power In / Charging
 PowerShare
 Thunderbolt 3 (40Gbps Bi-Directional)
 3.1 USB Gen 2 (10Gbps)+
 VGA, HDMI, Ethernet and USB-A
 via Dell Adapter (Sold Separately)
 Exterior Chassis Materials: CNC machined aluminum
 Edge-to-edge Corning® Gorilla® Glass NBT™ on 4K Ultra HD display
 Carbon fiber composite palm rest with soft touch paint
 Keyboard: Full size, backlit chiclet keyboard; 1.3mm travel
 Memory Slots: 2 x SoDIMMs
 Touchpad: Precision touchpad, seamless glass integrated button
 Dimensions: Height: 0.45 – 0.66" (11-17mm) | Width: 14.06" (357mm) | Depth: 9.27" (235mm)
 Weight: 4.4 lbs (2kg)3 with 84Whr battery, SSD and touch display
 Additional accessories: HDMI to VGA Adpator
 USB 3.0 to Ethernet Adaptor
 3 in 1 Mini Display Port Thuderbolt to DVI, HDMI & VGA Adaptor (VGA, HDMI, DVI & MiniDP)
 USB Optical Mouse

Lot 22 - Electronic Devices

1	Digital AV multiple adapter for Apple USB-C port to USB 3.0/2.0/1.1 and USB-C/Male to 3"USB3.0-A/Female+USB-C Power Delivery	2	
2	IC Tester 24-pin or higher display portable, light, usable with batteries device supported by 74 serial, 40 serial, 75 serial and driver (ULN) with display and power adaptor	3	

3	Laptop Storage Cabinet Design: See attached file: <i>Lot 22 Item 4 Laptop storage cabinet.doc</i> Can store 15-20 15" laptop Has charging ports Steel	1	
Lot 23- Audience Clicker			
1	Audience clickers Set of 30	2	