



AL-Hussein Bin Talal University

Proposal For

**(Tender for Supplying, Commissioning, and Activating a
Digital Acoustics Laboratory at the Faculty of
Arts)**

2025

Purpose

Al-Hussein Bin Talal University attends to make a computer lab specialized for Digital Acoustics Laboratory at the Faculty of Arts

Business Objectives

- Provide students and faculty with a modern, well-equipped acoustics lab to support teaching and research in phonetics, linguistics, and audio analysis.
- Align the lab's capabilities with the curriculum of language, literature, and communication studies, enabling practical training and experimentation.
- Facilitate advanced research in sound analysis, speech processing, and acoustic modeling, contributing to academic publications and innovation.
- Offer hands-on experience with acoustic technologies and software, improving student engagement and understanding of theoretical concepts.
- Deliver a fully operational lab with integrated hardware and software, along with training and documentation to ensure long-term usability and maintenance.
- Create opportunities for interdisciplinary collaboration between departments such as linguistics, engineering, and media studies.
- Ensure all supplied equipment and systems meet international standards for educational and research use in acoustics.

Technical Requirements

The main component for the tender is:

1. Personal Computer
2. Switch non-POE
3. IP Camera
4. Acoustics system
5. Cabling & Accessories
6. interactive board
7. air conditioner
8. Datashow
9. Table and chair

No.	Specification	Qty	Comply Yes/No
1	<u>Personal Computer</u> - Model: Well-Known Brand name - Series: Business Series - Manufacturing Requirements: Tower, Small (Mini) or Micro Form Factor - Main System Unit, Monitor, Mouse and Keyboard must carry the same brand name - Processor: Intel cor i5 gen 13 or 14 - Memory :16GB Memory DDR4 (Upgradable to 32GB) - Storage :512GB Solid State Disk, M.2 NVMe (PCIe) - Security: Discrete TPM 2.0 or above - Graphic Card: 4GB - Pointing Device type: USB mouse, optical, wheel with mouse pad - Keyboard: USB Arabic-English keyboard . - Monitor :21" LED Full HD, HDMI, DP or VGA port (must be same as case port) - Audio: High definition, Integrated sound system - Operating System: free DOS - Warranty: 3 years (labor, parts, on site)	31	
2	<u>Access Layer Switch Requirements (Non-PoE)</u> - Must be Rack Mountable 24-port models 10GBASE-T uplink ports for copper connectivity to aggregation or provide 10Gbase-T optical to copper transceiver 1 GE RJ45 ports for endpoint connectivity - Support for 802.1X authentication and MAC-based authentication - Advanced security features including DHCP snooping, ARP inspection, and IP source guard - At least forwarding rate 90mbps - At least switch Capacity: 100 Gbps - Warranty: 3 years (labor, parts, on site)	2	
3	<u>Camera 5 Mega Pixel</u> - Image sensor: progressive scan CMOS or CCD. - Compression: H.264, motion JPEG, MPEG-4. - Motion Detection: 3 regions and selectable sensitivity and threshold. - High quality night recording. - Power Source: Power over Ethernet. - Security: password protection, IP addresses filtering, HTTPS encryption. - Compatible with the management and recording software. - Three years manufacturers' original warrantee. <u>With Surveillance System License : Nuuo main console ,Model type : SBC-IP+</u>	1out door && 2 indoor	
4	<u>Digital Acoustics System:</u> - Tow Microphone one usb and one wireless - wall speakers with amplifier - Noise-Cancelling Headphoneswith microphone	QTY table	

No.	Specification	Qty	Comply Yes/No
5	<u>Cabling & Accessories</u> • Rack Cabinet • Cabinet with enough space to accommodate proposed solution (switches, patch panel, pdu etc...) • Front Doors and Side panels with keys. • PDUs Equipped with all necessary redundant Power Distribution Units of different Amp PDUs on both sides of each rack. • Network point Including: cat6 UTP cables, Unshielded Patch Panel, Patch cords Guide Panel, faceplates, Unshielded Connecters/ Jacks, RJ-45 Unshielded Patch Cord, Plastic PVC Pipe & Trunk Pipe. • Uplink from aggregation to the lab cat6a • Extending surveillance camera cables from the main room to designated camera locations, using appropriate conduit and cable types. • Cat6a UTP patch panels • Cat6a UTP patch cords . <u>Electrical Power Outlets</u> • Provide one (1) double electrical socket outlet for each workstation (31 units). • All outlets must be properly grounded and securely mounted. • Power cabling shall use 3×2.5 mm² copper wires. • All electrical and data outlets must be clearly labeled according to workstation numbers. • Cable paths must be neatly arranged and secured to prevent exposure, hazards, or tangling. <u>Electrical Distribution Panel</u> • Install an electrical distribution panel inside the lab with a sufficient number of circuit breakers. • Each breaker shall be connected to five (5) electrical outlets distributed across the workstations. • Includes the extension of a main power cable from the building's main electrical panel to the lab using a copper cable of size 3×10 mm². • Full grounding for all electrical points in accordance with safety standards. • All works must comply with the university's technical specifications and general electrical safety regulations.	QTY table	
6	<u>interactive Whiteboard</u> • Type: Touch-enabled smart board (Infrared or Capacitive technology) • Size: Minimum 75 inches diagonal • Resolution: 4K UHD (3840 × 2160) • Touch Points: Supports at least 10 simultaneous touch points • Compatibility: Fully compatible with Windows 11 and free software tools • Connectivity: HDMI, USB-C, DisplayPort, Wireless screen sharing (Miracast or equivalent) • Audio: Built-in stereo speakers (optional external speaker support) • Mounting: Wall-mounted or mobile stand (as per lab layout) • Accessories: • Stylus pens (2 or more) • Remote control • Wall mount kit or rolling stand • Software: Comes with basic annotation and screen recording tools • Warranty: 3 years (labor, parts, on site)	1	

No.	Specification	Qty	Comply Yes/No
7	<u>air conditioner</u> - Type Wall-Mounted Split System - Cooling Technology Direct Expansion (DX), Air-Cooled - Compressor Type Inverter (Scroll or Rotary) - Cooling Capacity 2Tons - Functions Cooling, Heating (Heat Pump), Dehumidification, Sleep Mode, Timer - Control Remote Control + Smart App (Wi-Fi) - Air Filtration Washable Filter (MERV 8–13) With Installation and Accessories & Extensions	1	
8	<u>Data show</u> - Technology: LCD or DLP - Brightness: 2600 ANSI Lumens at least - Cables & Accessories: 1. RGB Data Cable 2. Audio cable 3. Laser pointer 4. Extra molded 25 meters RGB Data cable 5. MK power cable 6. Remote control - All hardware components that make the projector Interactive on any surface (Floor Mount, Ceiling Mount) must be included - Contrast Ratio: 2000:1 for LCD, 2000:1 for DLP - Display size: at least to 100" diagonal - Lamp: Minimum 3000 Hour lifetime (Hi brightness mode) - In/out Connections: 1 x 15 pin D-sub for RGB Input (Computer) ,1 x HDMI Wired LAN, Wi-Fi ,1 x Audio jack 1 x mic - Warranty: Three Years Support & Warranty	1	
9	Table - Type Fixed workstation table (single or double station) - Material MDF or particle board with scratch-resistant melamine finish - Dimensions per Station Width: 110-120 cm, Depth: 60 cm, Height: 75-80cm - Surface Smooth, moisture-resistant, grey or wood finish - Frame Powder-coated steel or reinforced wood legs - Cable Management Integrated cable tray or grommet holes - Privacy Panel Optional front panel between stations Chair - Type Fixed plastic chair - Material High-density polypropylene or polycarbonate - Legs Four sturdy legs (plastic or powder-coated metal) - Weight Capacity :Up to 120 kg Instructors chair - Type: Comfortable and mobile office chair - Frame: Durable metal or plastic base with five wheels - Seat & Backrest: Padded with high-density foam and covered with fabric or synthetic leather - Support: High backrest with integrated lumbar support - Adjustability: Height and tilt adjustment mechanisms - Armrests: Equipped with adjustable armrests - Maximum Weight Capacity: Up to 150 kg	QTY table	

Table of quantity

No	Description		QTY	Unit Price	Total Price
1	Personal Computer		31		
2	24 port Switch non-POE		2		
3	ip camera	indoor	2		
		outdoor	1		
4	Acoustics system	Microphone	2		
		speaker with amplifier	4		
		headset	30		
5	Cabling & Accessories	Cabinet	1		
		UTP point	31		
		dubleElectrical point	32		
		Electrical Distribution Panel	lot		
		Patch cord .5m	31		
		Patch panel	2		
		Installation	-		
6	Interactive board		1		
7	Data show		1		
8	Air condition		1		
9	Table and chair	Table	31		
		chair	30		
		Instructors chair	4		
<u>Total Budgetary Price</u>					