



AGUSAN DEL SUR STATE COLLEGE OF AGRICULTURE AND TECHNOLOGY
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Supplemental Bid Bulletin No. 01

Project: Supply, Delivery and Installation of Electronics Engineering (ECE) Laboratory Training Systems

This Supplemental Bid Bulletin is issued to all prospective bidders to clarify, modify and/or amend items in the Bidding Documents as discussed and agreed during the Pre-bid Conference held on May 11, 2023 at 2:00 o'clock in the afternoon at the QMSC Board Room, ASSCAT, San Teodoro, Bunawan, Agusan del Sur.

A. Additional Specifications:

1. **In details of the Laboratory Manual and Exercises required for Item No. 1 Computer Controlled Antenna Trainer with SCADA**

- a. Understanding the basic principles and measurement of radiation pattern parameters.
- b. Learning the surrounding signals.
- c. Learning the distance effect over radiation power.
- d. Learning the direction of maximum radiation and gain of an antenna.
- e. Analysis of the antenna bandwidth.
- f. Learning about of monopole antennas, antennas with ground planes, dipole antennas, loop antennas (circular, square and diamond loop antennas), circular polarization helical antennas, Yagi-Uda antennas, microstrip patch antennas, horn antenna and parabolic reflector.
- g. Learning the SWR measurement and conversion in Return loss and Reflected Power.
- h. Designing on how to improve the performance of a system.
- i. Basic principles and concepts of wide bandwidth antennas: log-periodic antenna and discone antenna.
- j. Basic principles and concepts of microstrip patch array antenna.

2. **In details of the Laboratory Manual and Exercises required for Item No. 2 Computer Controlled Microwave Trainer with SCADA**

- a. Learning the power emission measurement.
- b. Learning the different fixed attenuators.
- c. Learning the calibration process of variable attenuators.
- d. Wavelength and frequency measurement with the waveguide slotted line.
- e. Stationary Wave Ratio (SWR) measurement.
- f. Understanding the basic principles of Smith chart.
- g. Calculate impedance, admittance and reflection coefficient.
- h. Learning the SWR values for different loads.



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- i. Comparison between matched and mismatched loads.
- j. Learning the broad-wall waveguide directional coupler, cross-guide waveguide directional coupler, and Hybrid Tee
- k. Measure of power emission and wavelength in free space.
- l. Understanding the radiation pattern of a horn antenna.
- m. Understanding the gain and directivity of a horn antenna (dBi).
- n. Learning the reflection of a dielectric plate and metallic plate.

For guidance and information of all concerned.


RUTH S. DESAMPARO
BAC Chairperson