



*"Towards Global Technological Excellence"*  
**GOVERNMENT COLLEGE OF ENGINEERING, AMRAVATI**  
(An Autonomous Institute of Government of Maharashtra)  
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No. GCoEA/E&Tc/Quotation/2022-23/3049

Date: 06/08/2022

To,  
M/S-----  
-----List is attached herewith-----  
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**Subject:** - Quotation for the training on "Practical Integrated Antennas- Designing, Analysis and Simulation" in the Department of Electronics Engineering at Government College of Engineering, Amravati.

Dear Sir,

Hereby quotations with lowest reasonable rates for the following training content are being called; send your quotation in the sealed cover to reach the undersigned on or before 17/08/2022.

Sr. No.	Content	Details
1.	<b>Training Title</b>	Practical Integrated Antennas- Designing, Analysis and Simulation, real time implementation and Testing.
2.	<b>Training Venue</b>	College premises
3.	<b>Training Duration</b>	4 days
4.	<b>Training Material</b>	Training Material should be handover to the participants on the commencement of the training
5.	<b>Training Certificate</b>	Certificate for all the participants
6.	<b>Antenna Fabrication and Testing</b>	Practical antennas must be fabricated and tested during the training program.
7.	<b>Training Objectives</b>	<ol style="list-style-type: none"><li>Exposure to RF &amp; Microwave Antenna Designs.</li><li>Get hands of practice with EM Simulation tools.</li><li>To study the Antenna Designing Issues.</li><li>Get working knowledge of antenna design techniques.</li><li>Brief and intense lectures by expert faculty.</li><li>Learn to design different types of antennas for various</li></ol>

		applications.
8.	<b>Syllabus</b>	<ul style="list-style-type: none"> <li>• Frequency and More Advanced Frequency Information.</li> <li>• Comparative study of different antenna types.</li> <li>• Study of antenna parameters like return loss, VSWR, gain &amp; bandwidth etc.</li> <li>• Concept of Voltage and current distribution over antenna.</li> <li>• Designing of yagi-uda, monopole, dipole, horn, &amp; patch antennas with all design steps.</li> <li>• Modelling steps for antenna selection and specification.</li> <li>• Case Study.</li> </ul>
9.	<b>Target Participant</b>	Final Year B. Tech. (70 -80 students)
10.	<b>Detailed contents</b>	<ul style="list-style-type: none"> <li>• Introduction to Antenna EDA tool</li> <li>• Introduction to RF and Microwave design</li> <li>• Introduction to Antenna;</li> <li>• Theory and its applications</li> <li>• Practical Approach for Antenna Design techniques</li> <li>• Antenna parameters</li> <li>• Antenna Types</li> <li>• Overview of EM simulation tools</li> <li>• Introduction to EM Software tool, GUI</li> <li>• Theory session, Design parameters</li> <li>• Design Equations</li> <li>• Problem statements with Hands on such as; Designing of Dipole Antenna at 435MHz, Design and analysis of Monopole Antenna at 900MHz, Design and analysis of 5 element Yagi-Uda Antenna at 615MHz, Design and analysis of Monopole Antenna at 435MHz, Design Comparison of Monopole, Dipole and Yagi uda antennas in terms of Bandwidth and gain.</li> <li>• Theory session on monopole antenna</li> <li>• Theoretical Approach with Design Solutions</li> <li>• Hands On session on Problem statement (Both; Monopole and Dipole)</li> <li>• Dipole antenna with reflector and 4 element Yagi Uda at 1500 MHz</li> <li>• Array Antennas</li> </ul>



		<ul style="list-style-type: none"> <li>• Types of arrays</li> <li>• Arrays Parameter</li> <li>• Arrays Design issues</li> <li>• Problem statement: Design and analysis of patch antenna at 2.4GHz.</li> <li>• Comparison of planer Vs. wire antennas</li> <li>• Introductions to aperture antenna/broadband antenna/transmission line</li> <li>• Hands on:</li> <li>• Problem statement: Design and analysis of helical antenna at 1600MHz</li> <li>• Problem statement: Design and analysis of horn antenna</li> <li>• Transmission line analysis.</li> </ul>
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**Note:**

- The dispatch number of this office i.e. outward number of the quotation call letter, the name of the department for which the quotation is desired and the heading "Quotation for the training of \_\_\_\_\_", should necessarily be superscribed on the main envelope.

### TERMS & CONDITIONS

It is proposed to have a Two Envelops System for this Quotation: Envelops should be sealed with a mention of the type of envelop (Technical / Financial) and the outward number of the quotation call letter. These two envelops should be sealed in a third (main) envelop, as mentioned above.

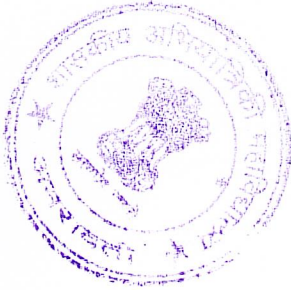
**Technical Specifications** – Cover should contain Technical specifications document.

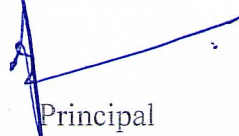
- Covering letter** for the quotation on the letter head of the supplier.
- Technical literature / relevant leaflets / catalogue** highlighting training features offered in the quotation must be enclosed in original.
- Establishment certificate** must be enclosed.
- ST/CST/VAT/GST registration certificate** along with respective **clearance certificate** for the assessment year is also necessary.
- Bidder must have deployed similar training activity earlier in Reputed Government / Government aided / non-aided Institutes. **Proofs of previously deployed training** must be submitted with the proposal.
- No-Deviation Statement:** No-Deviation statement for specification of the Training offered giving details of specifications in following pro-forma only (No other format will be accepted).

Supplier must fill the specified pro-forma and mere certifying that 'There is no deviation between Enquiry specifications and specifications quoted by the bidder' is not acceptable and such quotations are likely to be rejected.

(2) **Commercial Quotation** – Cover should contain price quote document.

- A) **Validity:** The rates offered should be valid at least for 90 days from the date of calling of quotations.
- B) **Price:** F.O.R. destination at Government College of Engineering, Amravati. The offer should be firm, inclusive of all taxes. No extra charges will be paid.
- C) **Payment:** 100% against satisfactory completion of training.
- D) **Taxes:** All the items/sub-items like taxes, duties, charges etc should be clearly mentioned.
- E) **Data Manual and operation manual** should be supplied at the time of training free of cost.
- F) The undersigned reserves the right to accept or reject any offer or all offers without assigning any reason thereof.
- G) The undersigned shall not incur any liability to pay interest for delay in payment of bills for any reasons what so ever.



  
Principal  
Government College of Engineering, Amravati

Proforma of No-Deviation Certificate

Name of the Supplier:

Specification of Training stated in Enquiry step by step as per specifications mentioned in document	Specification of Training offered by the supplier step by step	Whether there are deviation from the tender specification. Yes / No	If yes, indicate clearly which the deviations are
1	2	3	4
Specification detail I			
Specification detail 2...			
etc.			

Signature of Supplier with Seal