



## BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING, KOLHAPUR

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## NAAC SSR CYCLE- 2



<b>Criterion 3</b>	<b>Research, Innovations and Extension</b>
<b>Key Indicator 3.2</b>	<b>Innovation Ecosystem</b>
3.2.2 Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years	

**Workshop: Two Days Workshop on “Wire and Microstrip Patch antenna Design and Its analysis Using HFSS”**



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- **Organizing Department:** Electronics & Telecommunication Engineering.
- **Name of Activity:-** Two Days Workshop on “Wire and Microstrip Patch antenna Design and Its analysis Using HFSS”
- **Name of Co-ordinator:-** Mr. Sachin B. Jadhav
- **Date of Activity:-** 28<sup>th</sup> and 29<sup>th</sup> September 2018
- **Participants:-** U.G. T.E. Engineering Students (Electronics and Telecommunication Engineering)
- **Details of Activity:-** Two Days Workshop on “**Wire and Microstrip Patch antenna Design and Its analysis Using HFSS**” was organized by Department of Electronics and Telecommunication Engineering for U.G. T.E. Engineering Students. Under this workshop presentation and hands on session conducted on Wire and Microstrip Patch antenna Design and Its analysis Using HFSS are as follows

Day	Presentation & Hands on session	Details of content (Objectives)
1	<p><b>Content focus</b></p> <ol style="list-style-type: none"> <li>1. Antenna design and its mathematics</li> <li>2. Fabrication process of various antenna</li> <li>3. Polar plot &amp; its interpretation for mobile and wifi antenna</li> <li>4. Link budget &amp; noise budget</li> <li>5. Spectrum measurement, Interference measurement, Jamming Technique ACPR, OCBW, NW, RBW</li> </ol>	<ul style="list-style-type: none"> <li>• Hands on practice for digital and analog LINK development</li> <li>• Spectrum measurement and its use in telecom link management</li> <li>• Hands on RF antenna development (on the spot Antenna fabrication )</li> <li>• GPS mapping for RF SURVEY</li> <li>• Hands on antenna parameter measurement</li> </ul>
	Hands on practice for RF antenna development (on the spot antenna fabrication by participant)	Student Participated in a groups and according to specific design specifications given by expert they developed different types of wire

		<p>antennas such as:</p> <ol style="list-style-type: none"> <li>1. Collar Antenna</li> <li>2. Helical Antenna</li> <li>3. Yagi –Uda Antenna</li> <li>4. He Patch Antenna</li> <li>5. Monopole Antenna</li> <li>6. Slot Antenna etc.</li> </ol> <p>The designed antennas were tested using spectrum analyzer.</p>
2	Microstrip Patch antenna Design and Its analysis Using HFSS	<ul style="list-style-type: none"> <li>• On the day 2- Presentation and Hands on RF-Microstrip patch antenna given by expert.</li> <li>• All participants were asked to design and simulate the analysis of RF-Microstrip patch antenna on specification given by expert.</li> </ul>
3	Valedictory	<p>After successful completion of workshop:</p> <ul style="list-style-type: none"> <li>• All Participants were awarded with a certificates</li> </ul>

- **Impact of Activity:-** Students are able to work in team environment and apply the knowledge acquired during their course of study.

• **Photos:-**



**H.O.D.**  
**Dr.K.R.Desai**