



SIES Graduate School of Technology
Sri Chandrasekarendra Saraswati Vidyapuram
Sector 5, Nerul, Navimumbai-400706



Department of Electronics and Telecommunication

Event Report

Antennas and RF Components Design, Fabrication and Testing

Event Information
Event Type: Short Term Training Program (STTP)
Event title: Antennas and RF Components Design, Fabrication and Testing
Resource Person: Dr. Uday Pandit, Dr. C. D. Rawat, Dr. R. K. Gupta, Dr. Vinit Dongre, Dr. Promod Bhavarthe, Dr. S. D. Jagtap, and Prof. A. S. Kurhekar, Vandana Sawant
Event Date: 16 th December 2019 to 21 st December 2019
Organized for: Faculties, Research Scholars, PG students from Engineering Colleges & Industry Persons
Organized by: EXTC Dept and IEEE MTTS Student Chapter, SIES GST
Target Audience (Branch & Nos.): Faculties, Research Scholars, PG students from Engineering Colleges & Industry Persons
Attachments: 1. Photographs (in JPEG/PNG) 2. Attendance & Feedback Report 3. Impact Analysis:

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Event Description

EXTC Department of SIES GST and IEEE MTTs Chapter conducted Short Term Training Program (STTP) on "Antennas and RF Components Design, Fabrication and Testing", approved by AICTE-ISTE and IEEE Bombay Section MTT-S Chapter from Monday, 16th December 2019 to Saturday, 21st December, 2019 between 09:30 am to 4:30 pm at SIES Graduate School of Technology, Nerul.

The Course Objectives:

- To learn design constraints of RF components
- To gain new insights in various antenna designs and RF Design subject of semester VIII, EXTC engineering.

The Course Contents:

- RF Design constraints
- Design of various antennas, using IE3D Simulator
- Design of various RF components, using IE3D Simulator
- Design of Amplifier, using open source simulator.
- Reflection and Dispersion phase analysis of periodic structures.
- EMI and EMC in RF design
- RF MEMS, Fabrication and Testing of RF Components

Speakers:

- Dr. Uday Pandit, Professor, SFIT, Borivali.
- Dr. C. D. Rawat, Professor, VESIT, Sion.
- Dr. R. K. Gupta, Professor, TPCE, Nerul.
- Dr. Vinit Dongre, Professor, TCET, Kandivali.
- Dr. Promod Bhavarthe, Professor, PVPPCOE, Sion.
- Prof. A. S. Kurhekar, Professor, DMCE, Airoli.
- Dr. S. D. Jagtap, Professor, SIES GST, Nerul.

Day1: Monday, 16th Dec. 2019

Initially, **Asst. Prof. Shishir Jagtap**, from SIES Graduate School of Technology, Nerul, gave participants an insight on "transmission line theory", its types and applications. The effect of change in length of the transmission line on its input impedance is discussed. Also, the effect of change in load impedance, on input impedance of the transmission line is discussed. The reflection coefficient, voltage standing wave ratio and return loss parameters, their range, ideal values and practically acceptable values are discussed. The introduction and significance of "Scattering parameter" is discussed. Later, a quarter wave transformer



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based impedance matching network is designed analytically and practically, using method of moment based IE3D simulation software. Thereafter, **Dr. Vinit Dongre**, from Thakur College of Engineering and Technology, Kandivali, thrown light on fundamentals of electromagnetics. The fundamentals of coordinate system, vector analysis, Maxwell's equation are discussed. The fundamentals of antenna radiations and length of the antenna on antenna radiation characteristics is discussed. The concept of polarization is also discussed, using animation.

Day2: Tuesday, 17th Dec. 2019

Initially, **Asst. Prof. Shishir Jagtap**, from SIES Graduate School of Technology, Nerul, gave participants an insight on "Fundamentals of Microstrip Antenna", its feeding techniques, advantages, disadvantages and applications. Later, a line fed and probe fed rectangular Microstrip antennas are designed, using IE3D simulation software. Also, the effect of change in feed position, probe diameter, patch length and width on antenna radiation characteristics is studied using IE3D simulation software.

Thereafter, a multiple input multiple output (MIMO) antenna, using 2-element square microstrip antennas, separated by half wavelength is designed in IE3D, to operate over 5.725GHz to 5.875GHz, ISM frequency band. Later, a compact, 2-element MIMO antenna, using polarization, pattern, and frequency diversity techniques are designed. Also, a compact, dual polarized microstrip antenna is designed. Thereafter, a compact, MIMO antenna system by amalgamation of polarization, frequency and pattern diversity techniques is discussed.

Day3: Wednesday, 18th Dec. 2019

Initially, **Asst. Prof. Shishir Jagtap**, from SIES Graduate School of Technology, Nerul, gave participants an insight on the scattering parameters and design of "2-way equal power divider". The 2-way equal power divider is designed, using IE3D simulation software. Also, the design constraints of 3-way and 4-way equal power divider, is discussed. Later, **Dr. Pramod Bhavarthe**, from Padmabhushan Vasantdada Patil Pratishthan College of Engineering, Sion gave participants an insight on the use of periodic structures in antenna design. The reflection and dispersion phase analysis of a periodic structure, using ANSYS HFSS is discussed.

Day4: Thursday, 19th Dec. 2019

Initially, **Dr. Rajiv Kumar Gupta**, from Terna Engineering College, Nerul, gave participants an insight on the design of microstrip monopole antenna. The single band and dual band microstrip monopole antenna is designed using IE3D simulation software. Also, a tri-band and ultra-wideband microstrip monopole antenna design using IE3D simulator is discussed. Thereafter, **Asst. Prof. Shishir Jagtap**, from SIES Graduate School of Technology, Nerul, had thrown lights on fundamentals of filter design. Initially, a lumped



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component, low pass filter, in T and pi type network is designed, using analytical method. Later, the design calculations and filter responses are verified, using open source RF-SIM99 simulation software. Also, a microstrip (stubs) low pass filter design using (a) stepped impedance method and (b) Kuroda's identity is designed in IE3D simulator.


Day5: Friday, 20th Dec. 2019

Initially, **Dr. C. D. Rawat**, from Vivekananda Education Society's information and Technology, gave participants an insight on the "EMI and EMC in RF Design". The importance of EMI and EMC testing in launching of a product is discussed. The EMI and EMC testing is demonstrated by, Mr. Sanjay Pitale and his colleague, from Automate Process Control. Later, **Dr. Uday Pandit Khot**, from St. Francis Institute of Technology, Borivali, had thrown lights on various amplifier designs. Also, Amplifier design, using ADS and open source software is discussed. Thereafter, **Asst. Prof. Shishir Jagtap**, from SIES Graduate School of Technology, Nerul, had thrown lights on antenna fabrication. A 2-element-Microstrip MIMO antenna using polarization diversity is fabricated.

Day6: Saturday, 21st Dec. 2019

Prof. A. S. Kurhekar, from Datta Meghe College of Engineering, gave participants an insight on "RF MEMS". Thereafter, **Asst. Prof. Shishir Jagtap**, from SIES Graduate School of Technology, Nerul, had thrown lights on design of a Directional Coupler, using IE3D simulator. The RF component testing session is carried out, followed by online test and feedback of the participants.

At the end, attendees learned a lot about Antennas and RF Components Design, Fabrication and Testing.


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1. Photographs (in JPEG/PNG):




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Name of the Participant	16-12-2019 (Monday)		17-12-2019 (Tuesday)		18-12-2019 (Wednesday)		19-12-2019 (Thursday)		20-12-2019 (Friday)		21-12-2019 (Saturday)	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
	Sign	Sign	Sign	Sign	Sign	Sign	Sign	Sign	Sign	Sign	Sign	Sign
Umesh Pijorkar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
A. Patil	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Junaid M	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pooja Khatke	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Suresh Khatke	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Arvind Shinde	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sanjay Khatke	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

9	Vishal Khatke	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.5	20.5	21.5	22.5	23.5	24.5	25.5	26.5	27.5	28.5	29.5	30.5	31.5	32.5	33.5	34.5	35.5	36.5	37.5	38.5	39.5	40.5	41.5	42.5	43.5	44.5	45.5	46.5	47.5	48.5	49.5	50.5	51.5	52.5	53.5	54.5	55.5	56.5	57.5	58.5	59.5	60.5	61.5	62.5	63.5	64.5	65.5	66.5	67.5	68.5	69.5	70.5	71.5	72.5	73.5	74.5	75.5	76.5	77.5	78.5	79.5	80.5	81.5	82.5	83.5	84.5	85.5	86.5	87.5	88.5	89.5	90.5	91.5	92.5	93.5	94.5	95.5	96.5	97.5	98.5	99.5	100.5	101.5	102.5	103.5	104.5	105.5	106.5	107.5	108.5	109.5	110.5	111.5	112.5	113.5	114.5	115.5	116.5	117.5	118.5	119.5	120.5	121.5	122.5	123.5	124.5	125.5	126.5	127.5	128.5	129.5	130.5	131.5	132.5	133.5	134.5	135.5	136.5	137.5	138.5	139.5	140.5	141.5	142.5	143.5	144.5	145.5	146.5	147.5	148.5	149.5	150.5	151.5	152.5	153.5	154.5	155.5	156.5	157.5	158.5	159.5	160.5	161.5	162.5	163.5	164.5	165.5	166.5	167.5	168.5	169.5	170.5	171.5	172.5	173.5	174.5	175.5	176.5	177.5	178.5	179.5	180.5	181.5	182.5	183.5	184.5	185.5	186.5	187.5	188.5	189.5	190.5	191.5	192.5	193.5	194.5	195.5	196.5	197.5	198.5	199.5	200.5	201.5	202.5	203.5	204.5	205.5	206.5	207.5	208.5	209.5	210.5	211.5	212.5	213.5	214.5	215.5	216.5	217.5	218.5	219.5	220.5	221.5	222.5	223.5	224.5	225.5	226.5	227.5	228.5	229.5	230.5	231.5	232.5	233.5	234.5	235.5	236.5	237.5	238.5	239.5	240.5	241.5	242.5	243.5	244.5	245.5	246.5	247.5	248.5	249.5	250.5	251.5	252.5	253.5	254.5	255.5	256.5	257.5	258.5	259.5	260.5	261.5	262.5	263.5	264.5	265.5	266.5	267.5	268.5	269.5	270.5	271.5	272.5	273.5	274.5	275.5	276.5	277.5	278.5	279.5	280.5	281.5	282.5	283.5	284.5	285.5	286.5	287.5	288.5	289.5	290.5	291.5	292.5	293.5	294.5	295.5	296.5	297.5	298.5	299.5	300.5	301.5	302.5	303.5	304.5	305.5	306.5	307.5	308.5	309.5	310.5	311.5	312.5	313.5	314.5	315.5	316.5	317.5	318.5	319.5	320.5	321.5	322.5	323.5	324.5	325.5	326.5	327.5	328.5	329.5	330.5	331.5	332.5	333.5	334.5	335.5	336.5	337.5	338.5	339.5	340.5	341.5	342.5	343.5	344.5	345.5	346.5	347.5	348.5	349.5	350.5	351.5	352.5	353.5	354.5	355.5	356.5	357.5	358.5	359.5	360.5	361.5	362.5	363.5	364.5	365.5	366.5	367.5	368.5	369.5	370.5	371.5	372.5	373.5	374.5	375.5	376.5	377.5	378.5	379.5	380.5	381.5	382.5	383.5	384.5	385.5	386.5	387.5	388.5	389.5	390.5	391.5	392.5	393.5	394.5	395.5	396.5	397.5	398.5	399.5	400.5	401.5	402.5	403.5	404.5	405.5	406.5	407.5	408.5	409.5	410.5	411.5	412.5	413.5	414.5	415.5	416.5	417.5	418.5	419.5	420.5	421.5	422.5	423.5	424.5	425.5	426.5	427.5	428.5	429.5	430.5	431.5	432.5	433.5	434.5	435.5	436.5	437.5	438.5	439.5	440.5	441.5	442.5	443.5	444.5	445.5	446.5	447.5	448.5	449.5	450.5	451.5	452.5	453.5	454.5	455.5	456.5	457.5	458.5	459.5	460.5	461.5	462.5	463.5	464.5	465.5	466.5	467.5	468.5	469.5	470.5	471.5	472.5	473.5	474.5	475.5	476.5	477.5	478.5	479.5	480.5	481.5	482.5	483.5	484.5	485.5	486.5	487.5	488.5	489.5	490.5	491.5	492.5	493.5	494.5	495.5	496.5	497.5	498.5	499.5	500.5	501.5	502.5	503.5	504.5	505.5	506.5	507.5	508.5	509.5	510.5	511.5	512.5	513.5	514.5	515.5	516.5	517.5	518.5	519.5	520.5	521.5	522.5	523.5	524.5	525.5	526.5	527.5	528.5	529.5	530.5	531.5	532.5	533.5	534.5	535.5	536.5	537.5	538.5	539.5	540.5	541.5	542.5	543.5	544.5	545.5	546.5	547.5	548.5	549.5	550.5	551.5	552.5	553.5	554.5	555.5	556.5	557.5	558.5	559.5	560.5	561.5	562.5	563.5	564.5	565.5	566.5	567.5	568.5	569.5	570.5	571.5	572.5	573.5	574.5	575.5	576.5	577.5	578.5	579.5	580.5	581.5	582.5	583.5	584.5	585.5	586.5	587.5	588.5	589.5	590.5	591.5	592.5	593.5	594.5	595.5	596.5	597.5	598.5	599.5	600.5	601.5	602.5	603.5	604.5	605.5	606.5	607.5	608.5	609.5	610.5	611.5	612.5	613.5	614.5	615.5	616.5	617.5	618.5	619.5	620.5	621.5	622.5	623.5	624.5	625.5	626.5	627.5	628.5	629.5	630.5	631.5	632.5	633.5	634.5	635.5	636.5	637.5	638.5	639.5	640.5	641.5	642.5	643.5	644.5	645.5	646.5	647.5	648.5	649.5	650.5	651.5	652.5	653.5	654.5	655.5	656.5	657.5	658.5	659.5	660.5	661.5	662.5	663.5	664.5	665.5	666.5	667.5	668.5	669.5	670.5	671.5	672.5	673.5	674.5	675.5	676.5	677.5	678.5	679.5	680.5	681.5	682.5	683.5	684.5	685.5	686.5	687.5	688.5	689.5	690.5	691.5	692.5	693.5	694.5	695.5	696.5	697.5	698.5	699.5	700.5	701.5	702.5	703.5	704.5	705.5	706.5	707.5	708.5	709.5	710.5	711.5	712.5	713.5	714.5	715.5	716.5	717.5	718.5	719.5	720.5	721.5	722.5	723.5	724.5	725.5	726.5	727.5	728.5	729.5	730.5	731.5	732.5	733.5	734.5	735.5	736.5	737.5	738.5	739.5	740.5	741.5	742.5	743.5	744.5	745.5	746.5	747.5	748.5	749.5	750.5	751.5	752.5	753.5	754.5	755.5	756.5	757.5	758.5	759.5	760.5	761.5	762.5	763.5	764.5	765.5	766.5	767.5	768.5	769.5	770.5	771.5	772.5	773.5	774.5	775.5	776.5	777.5	778.5	779.5	780.5	781.5	782.5	783.5	784.5	785.5	786.5	787.5	788.5	789.5	790.5	791.5	792.5	793.5	794.5	795.5	796.5	797.5	798.5	799.5	800.5	801.5	802.5	803.5	804.5	805.5	806.5	807.5	808.5	809.5	810.5	811.5	812.5	813.5	814.5	815.5	816.5	817.5	818.5	819.5	820.5	821.5	822.5	823.5	824.5	825.5	826.5	827.5	828.5	829.5	830.5	831.5	832.5	833.5	834.5	835.5	836.5	837.5	838.5	839.5	840.5	841.5	842.5	843.5	844.5	845.5	846.5	847.5	848.5	849.5	850.5	851.5	852.5	853.5	854.5	855.5	856.5	857.5	858.5	859.5	860.5	861.5	862.5	863.5	864.5	865.5	866.5	867.5	868.5	869.5	870.5	871.5	872.5	873.5	874.5	875.5	876.5	877.5	878.5	879.5	880.5	881.5	882.5	883.5	884.5	885.5	886.5	887.5	888.5	889.5	890.5	891.5	892.5	893.5	894.5	895.5	896.5	897.5	898.5	899.5	900.5	901.5	902.5	903.5	904.5	905.5	906.5	907.5	908.5	909.5	910.5	911.5	912.5	913.5	914.5	915.5	916.5	917.5	918.5	919.5	920.5	921.5	922.5	923.5	924.5	925.5	926.5	927.5	928.5	929.5	930.5	931.5	932.5	933.5	934.5	935.5	936.5	937.5	938.5	939.5	940.5	941.5	942.5	943.5	944.5	945.5	946.5	947.5	948.5	949.5	950.5	951.5	952.5	953.5	954.5	955.5	956.5	957.5	958.5	959.5	960.5	961.5	962.5	963.5	964.5	965.5	966.5	967.5	968.5	969.5	970.5	971.5	972.5	973.5	974.5	975.5	976.5	977.5	978.5	979.5	980.5	981.5	982.5	983.5	984.5	985.5	986.5	987.5	988.5	989.5	990.5	991.5	992.5	993.5	994.5	995.5	996.5	997.5	998.5	999.5	1000.5	1001.5	1002.5	1003.5	1004.5	1005.5	1006.5	1007.5	1008.5	1009.5	1010.5	1011.5	1012.5	1013.5	1014.5	1015.5	1016.5	1017.5	1018.5	1019.5	1020.5	1021.5	1022.5	1023.5	1024.5	1025.5	1026.5	1027.5	1028.5	1029.5	1030.5	1031.5	1032.5	1033.5	1034.5	1035.5	1036.5	1037.5	1038.5	1039.5	1040.5	1041.5	1042.5	1043.5	1044.5	1045.5	1046.5	1047.5	1048.5	1049.5	1050.5	1051.5	1052.5	1053.5	1054.5	1055.5	1056.5	1057.5	1058.5	1059.5	1060.5	1061.5	1062.5	1063.5	1064.5	1065.5	1066.5	1067.5	1068.5	1069.5	1070.5	1071.5	1072.5	1073.5	1074.5	1075.5	1076.5	1077.5	1078.5	1079.5	1080.5	1081.5	1082.5	1083.5	1084.5	1085.5	1086.5	1087.5	1088.5	1089.5	1090.5	1091.5	1092.5	1093.5	1094.5	1095.5	1096.5	1097.5	1098.5	1099.5	1100.5	1101.5	1102.5	1103.5	1104.5	1105.5	1106.5	1107.5	1108.5	1109.5	1110.5	1111.5	1112.5	1113.5	1114.5	1115.5	1116.5	1117.5	1118.5	1119.5	1120.5	1121.5	1122.5	1123.5	1124.5	1125.5	1126.5	1127.5	1128.5	1129.5	1130.5	1131.5	1132.5	1133.5	1134.5	1135.5	1136.5	1137.5	1138.5	1139.5	1140.5	1141.5	1142.5	1143.5	1144.5	1145.5	1146.5	1147.5	1148.5	1149.5	1150.5	1151.5	1152.5	1153.5	1154.5	1155.5	1156.5	1157.5	1158.5	1159.5	1160.5	1161.5	1162.5	1163.5	1164.5	1165.5	1166.5	1167.5	1168.5	1169.5	1170.5	1171.5	1172.5	1173.5	1174.5	1175.5	1176.5	1177.5	1178.5	1179.5	1180.5	1181.5	1182.5	1183.5	1184.5	1185.5	1186.5	1187.5	1188.5	1189.5	1190.5	1191.5	1192.5	1193.5	1194.5	1195.5	1196.5	1197.5	1198.5	1199.5	1200.5	1201.5	1202.5	1203.5	1204.5	1205.5	1206.5	1207.5	1208.5	1209.5	1210.5	1211.5	1212.5	1213.5	1214.5	1215.5	1216.5	1217.5	1218.5	1219.5	1220.5	1221.5	1222.5	1223.5	1224.5	1225.5	1226.5	1227.5	1228.5	1229.5	1230.5	1231.5
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2. Attendance & Feedback Report (Scanned copy):

Sl. No. of the participant	Particulars of the topic	1. The content was as described in publicity materials	2. The STTP was relevant to your profession	3. The program was well planned within the allotted time	4. The speakers/Resource persons/Instructors were good communicators	5. The speakers/Resource persons/instructors were knowledgeable in the on the topics	6. In your opinion, the STTP was	7. Will you recommend this STTP to other organizations?	8. The session you appreciated/ enjoyed most in this course	9. Did you interact for mutual benefit to the STTP?	10. How did you come to know about the STTP?	11. Was the publicity appropriate?	12. Was the information process satisfactory?	13. Please mention the highlights	14. Please note the ambience of the room	15. Please note the technical facilities provided during the STTP	16. Please note the Overall Workshop STTP
Vandana Suresh	SBS GST	4	3	3	3	3	Intermediate	Yes	Personal ref session	Yes	Booklets	Yes	yes	3	3	3	3
Shravan Kulkarni	SBS GST	3	3	3	3	3	Advanced	Yes	Applied in design	Yes	Booklets	Yes	yes	3	3	3	3
Pratik Dhand	SBS GST	3	3	3	3	3	Advanced	Yes	All sessions	Yes	Mail	Yes	yes	3	3	3	3
SURYASEKAR SINGH	SVIT HANU (MADRAS)	3	3	3	3	3	Advanced	Yes	yes	Yes	Booklets	Yes	yes	3	3	3	3
ANUR AGARWAL	Pita HEC College of Engineering and Technology	3	3	3	3	3	Advanced	Yes	Student laptop	Yes	Collaboration	Yes	yes	3	3	3	3
Harish Mahalingam	Ravi College of Engineering	3	3	3	3	3	Advanced	Yes	Design of Antenna using RFD by Prof. Shashiraj	Yes	Booklets	Yes	yes	3	3	3	3
Shree Patil	SBS GST, Madras	3	3	3	3	3	Advanced	Yes	R.K. Gupta for conceptual information process by Shashiraj	Yes	Booklets	Yes	yes	3	3	3	3
Ravi Mahalingam	SBS GST	3	3	3	3	3	Advanced	Yes	All sessions were excellent	Yes	Booklets	Yes	yes	3	3	3	3
Ramesh Arora College	Tata Engineering College	3	3	3	3	3	Advanced	Yes	Booklets session	Yes	Mail	Yes	yes	3	3	3	3
Sankar Kumar D	SBS GST	3	3	3	3	3	Advanced	Yes	Design of Antenna using RFD by Prof. Shashiraj	Yes	Collaboration	Yes	yes	3	3	3	3
Sandeep Anand	A. C. Patel College of Engineering Bangalore	3	3	3	3	3	Advanced	Yes	1. Design of Microstrip Line by Prof. Shashiraj, 2. Proprietary and Lossy PDA by Prof. Shashiraj, 3. MIMO with Diversity Technology, 4. Two input power and coefficient, 5. Design of Microstrip Filter by Prof. Shashiraj, 6. RF amplifier design by Dr. Uday Sankar Rao	Yes	App notes	Yes	yes	3	3	3	3
Dr. Anuradha Deshpande	Indraprastha College of Engg. Tech	3	3	3	3	3	Intermediate	Yes	It started from basics and developed gradually to advanced antenna design process	Yes	Booklets	Yes	yes	3	3	3	3

(Signature)

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SIES Graduate School of Technology
Sri Chandrasekarendra Saraswati Vidyapuram
Sector 5, Nerul, Navimumbai-400706




Department of Computer Engineering

Event Report

One day Workshop on R

Event Information
Event Type: One day Workshop on R Under the aegis of the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, MHRD, Govt. of India.
Event Title: One day Workshop on Linux Conducted by the Teaching Learning Centre (ICT)
Resource Person: Conducted by the Teaching Learning Centre (ICT), Supported by FOSSEE & Spoken Tutorials
Event Date: 9 November 2019
Organized for: Faculties
Organized by: Teaching Learning Centre (ICT), Supported by FOSSEE & Spoken Tutorials
Target Audience (Branch & Nos.): College Faculties
Attachments: 1. Photographs (JPEG/PNG)


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Event Description

IIT Bombay conducted highly effective Spoken Tutorial based ICT training to a large number of teachers, across the country, through the T10KT methodology, with R programming being taken up next.

It was a one day workshop, on 9 November 2019 at SIESGST (1217) is remote center for NMEICT events. 14 participants from nearby colleges and schools participated, they learned R through the active method of reproducing every command demonstrated in the award-winning Spoken Tutorials. All the participants, from all the Remote Centre interacted with the Linux team at IIT Bombay to ask them questions, etc. through the video conferencing software A-VIEW. There was about 4 to 5 hours available for R training and 2 hours for interactions. A timed discussion forum <https://forums.spoken-tutorial.org/> was used to answer the questions that the participants may had.



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1. Photographs (in JPEG/PNG):




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2. Attendance (Scanned copy):


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Sector-V, Nerul, Navi Mumbai-400706

Attendance Sheet for Date : 2018-11-09
 One day Workshop on AI & November 2018
 November 8th, 2019 to November 9th, 2019
 Under the National Mission on Education through ICT, MHRD, New Delhi
 1217 - SIES Graduate School of Technology, Nerul, Navi Mumbai

Participant		Signature			
S. No.	Participant ID	Name	Session 1	Session 2	Session 3
1	215164	Murali Parameswaran			
2	215165	Palani Chelvan			
3	215166	Vandana Saroj			
4	215178	Sachin Thosar			
5	215500	Chetan Sankar			
6	215522	Pradnya Patil			
7	217328	Surekha Kulkarni			
8	217329	Liyana Ravale			
9	217531	Supriya Chettago			
10	218017	Sulata Das			
11	218113	Seema Redekar			
12		Priyanka Shinde			
13		Mukim Nirmal			
14		Gunesh Puri			


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Department of Information Technology

Event Report

AICTE-ISTE approved STTP on "DevOps and R Programming"

Event Information	
Event Type:	Guest Lecture
Event Title:	AICTE-ISTE approved STTP on "DevOps and R Programming"
Resource Person:	Prof. Mahendra Mehra & Dr. Bhushan Jadhav
Event Date:	16th December 2019 to 21st December 2019
Organized for:	Faculties, Research scholars and PG students from AICTE approved Engineering and Polytechnics Colleges
Organized by:	Department of Information Technology
Target Audience (Branch & Nos.):	Faculties, Research scholars and PG students from AICTE approved Engineering and Polytechnics Colleges
Attachments:	1. Photographs (JPEG/PNG) 2. Attendance Report 3. Feedback Report


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Sector-5, Nerul, Navi Mumbai-400706

Event Description

The department of Information Technology of SIES Graduate School of Technology, Nerul, Navi Mumbai has successfully organized and conducted one week AICTE-ISTE approved Self-Financed Short term training program on "**DevOps and R Programming**" from 16/12/2019 to 21/12/2019.

Day 1:

The Concept of Devops with related technologies which are used to code, Build Test, Configure and Monitor the software applications was conducted by Prof. Mahendra Mehta, FRCRCE Bandra.

The topics included basics of ubuntu and also the virtualbox and installation of ansible on ubuntu. And connecting to SSH over LAN is done.

Day 2:

The second day session was conducted by Prof. Mahendra Mehta. Topics covered included installation of Docker, basic Docker commands, Docker environment variables, Docker images, Docker storage using Docker hub, etc.

Day3:

The third day covered topics on different roles and Command Line usage of Ansible by Prof. Mahendra Mehta. Also covered configuration management tool Puppet and it's use for deploying, configuring and managing servers.

Day 4:

A daylong session on how to perform Continuous Integration using Jenkins was conducted by Dr. Bhushan Jadhav, TSEC Bandra. He covered topics on Jenkins Management Preview, adding a slave node to Jenkins, Building Delivery Pipeline, Pipeline as a Code. Also covered how to do version control with Git, installation of Git, Common commands in Git and working with remote repositories.

Day 5:

The 5th day morning session was on Nagios by Dr. Bhushan Jadhav. He gave introduction to use of Nagios tool for continuous monitoring. Use of Nagios in monitor system, network, and infrastructure are also included.

Second half of the day was on Introduction to R programming. The session was conducted by Prof. Seema Redekar, SIES GST, Nerul. Topics included the use of R to perform descriptive statistics including graphics, perform basic data, write and use R script files, use


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R packages, write and use R functions, and perform basic programming in R including loops

Day 6:

The 6th day session was conducted by Prof. Stuti Ahuja on data Analytics using R and a test is conducted on overall contents. Topics covered included the principle concepts and techniques of data analytics and how to apply them to large-scale data sets.

Valedictory:

The one week long STTP was concluded by the valedictory function including all faculty from Information Technology department.

Feedback:

The training program had overwhelming response from speakers and attendees. All participants received the program very well and can use the knowledge in their professional career.



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1. Photographs (in JPEG/PNG):



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2. Attendance and Feedback Report (Scanned copy):


AT 12, 15, 18 approved NITP on "Des-Clips and R Programming"

Organized by
Department of Information Technology
Attendance Sheet

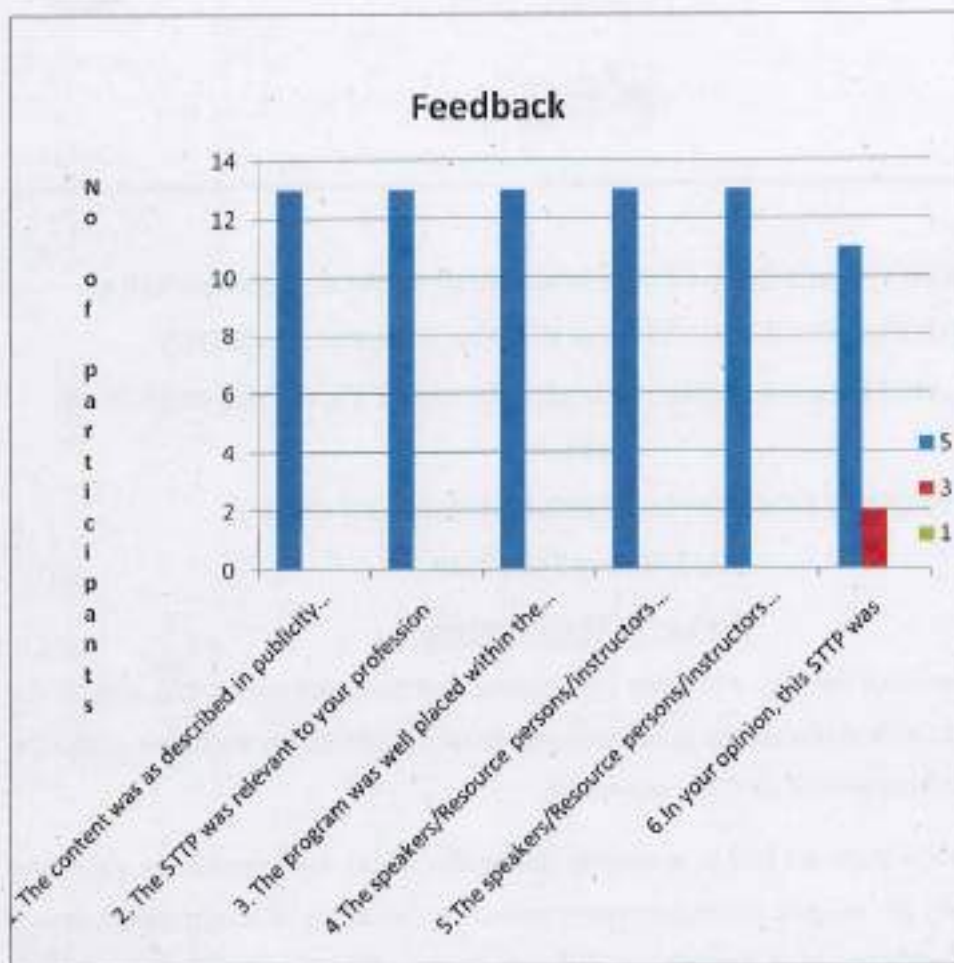
No.	Name of Participant	Morning Session Signature 16/12/19	Evening Session Signature 16/12/19	Morning Session Signature 17/12/19	Evening Session Signature 17/12/19	Morning Session Signature 18/12/19	Evening Session Signature 18/12/19
1	Dr. K. Lakshminadha						
2	Ms. Laxmi V. Ladga						
3	Ms. Minni Khadke						
4	Ms. Savita Lokhe						
5	Ms. Suma Redekar						
6	Ms. Smiti Ahuja						
7	Ms. Bhusha Sheth						
8	Ms. Saritha L. R.						
9	Mrs. Sujata Oak						
10	Mr. Harish Morekar						
11	Mr. Desika Rani Roy						
12	Ms. Manjusha Sheth						
13	Dr. Vaidhali Jadhav						
14	Ms. Vijaya Bharami						

Organized by
Department of Information Technology
Attendance Sheet

No.	Name of Participant	Morning Session Signature 16/12/19	Evening Session Signature 16/12/19	Morning Session Signature 17/12/19	Evening Session Signature 17/12/19	Morning Session Signature 18/12/19	Evening Session Signature 18/12/19
1	Dr. K. Lakshminadha						
2	Ms. Laxmi V. Ladga						
3	Ms. Minni Khadke						
4	Ms. Savita Lokhe						
5	Ms. Suma Redekar						
6	Ms. Smiti Ahuja						
7	Ms. Bhusha Sheth						
8	Ms. Saritha L. R.						
9	Mrs. Sujata Oak						
10	Mr. Harish Morekar						
11	Mr. Desika Rani Roy						
12	Ms. Manjusha Sheth						
13	Dr. Vaidhali Jadhav						
14	Ms. Vijaya Bharami						


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Impact Analysis:



The training program had overwhelming response from speakers and attendees. All participants received the program very well and can use the knowledge in their professional career.


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SIES GRADUATE SCHOOL OF TECHNOLOGY, NERUL, NAVI MUMBAI
DEPARTMENT OF PRINTING & PACKAGING TECHNOLOGY
ONE WEEK AICTE – ISTE APPROVED SHORT TERM TRAINING PROGRAM
ON

“FOOD PACKAGING & SHELF LIFE ESTIMATION”

16/12/2019 to 21/12/2019

Report of the Program

Shelf life is the period of time for which the food product can be stored and remain suitable for use. It is important for food processing industries to maintain its shelf life to the fullest so that the food retains its nutritional value until it is consumed.

Food packaging plays a crucial role in maintaining the quality of the food product by providing barrier for moisture, air, oxygen, micro organisms and so on. Selection of barrier materials is a critical step in the industry as it depends on different factors. The factors like permeability/transmission rate, relative humidity, processability, low cost and so on.

Therefore, before selecting barrier material for food packaging, a thorough knowledge of food packaging principles is required.

The one week short term training program was organized with the following objectives:

- To understand Food Packaging Principles, different materials used and its properties.
- To learn different predictive models for shelf life estimation.
- To get an insight on the latest packaging technologies and their applications.

This program was organized for Faculty members from institutes offering Packaging Courses and Food Science & Technology courses, P.G/Ph.D students, Industry Personnel.


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There were 28 participants from various institutes and industry. The list of participants is given below; there were 4 participants with life membership of ISTE, 1 participant has already applied for life membership and 2 participants applications are being sent along with this report. Rest 21 participants are Non-ISTE Members.

List of Participants:

S.No	Name of the Participant	Mail id	ISTE Membership Number
1	Dr Sandeep P Shewale	spshewale@mitaoe.ac.in	LM 69981
2	Shubhangi Sanjay Kadu	kadushubhangi@gmail.com	LM55780
3	Prasad Balan Iyer	prasad.iyer@siesgst.ac.in	LM126352
4	Katyayini Shirur	katyayini.tembadmani@siesgst.ac.in	LM79836
5	Sandesh S Ramteke	ramteke.sandesh@siesgst.ac.in	Applied for Life Membership
6	Sagar S. Waghmare	sagar.waghmare@siesgst.ac.in	Applied for Life Membership
7	Gaurav Tejram Fasate	gaurav.fasate@siesgst.ac.in	Applied for Life Membership
8	Miss. Jamdar Jaya Laxman	jayajamdar88@gmail.com	Non ISTE Member from Industry
9	Vishwas Ghatge	vishwas.ghatge@genmills.com	Non ISTE Member from Industry
10	Shyam Dave	daveshyam21@gmail.com	Non ISTE Member
11	Habibulla Meerasha	creativehabib@gmail.com	Non ISTE Member from Industry
12	Vihar Ramchandra Patil	Viharpatil2921@gmail.com	Non ISTE Member


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13	Bharat Sawnani	bharat.sawnani@genmills.com	Non ISTE Member from industry
14	Hetal premji bhanushali	Bhanushalihetal561@gmail.com	Non ISTE Member
15	Aishwarya sunil wagh	aishwagh24@gmail.com	Non ISTE Member
16	Syed Khizer	sdkhizerhussain7@gmail.com	Non ISTE Member
17	Ayushi Bhattacharjee	ayushibhatta304@gmail.com	Non ISTE Member
18	Sahil mujawar	mesahilmujawar@gmail.com	Non ISTE Member
19	Nidhi Pravin Randive	nidhirandive692@gmail.com	Non ISTE Member
20	Pranali Pangerkar	pranalipangerkar1026@gmail.com	Non ISTE Member
21	Urvi V Gadgil	urvigadgil9@gmail.com	Non ISTE Member
22	Shruti Sunil Vartak	shruti.sv1997@gmail.com	Non ISTE Member
23	Sampada Munj	sampada.munj@sealedair.com	Non ISTE Member from Industry
24	Rajat ganwani	ganwanirajat@gmail.com	Non ISTE Member
25	Hinali Tandel	hinalitandel@gmail.com	Non ISTE Member
26	G Vighneshwaran	vigneshwaran1597@gmail.com	Non ISTE Member
27	Sushant Pradhan	sushpradhan29@gmail.com	Non ISTE Member
28	Gokul Jadhav	gokul.jadhav@sealedair.com	Non ISTE Member

The Deatiled Schedule of the program is given below:

DAY 1 – 16/12/2019:

9:15 am – Registration (Venue – SIES Graduate School of Technology Admin Office)

9:45 am – Inauguration (Venue – School of Packaging Seminar Hall 2nd floor)

10:15 am – Session 1 starts

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Day 1 – FOOD PACKAGING BASICS STAGE		
1015-1100 hrs	SESSION 1 Introduction to Food Packaging, Basic Principle and Characteristics and types of food products,	Prof C S Purushothaman
1100-1115 hrs	TEA BREAK	
1115-1215 hrs	SESSION 2 Various package forms, Major Materials used, Desired Material Properties	Prof C S Purushothaman
1215-1330 hrs	LUNCH	
1330-1430 hrs	SESSION 3 Importance of WVTR, OTR, Permeation	Prof C S Purushothaman
1430-1445 hrs	TEA BREAK	
1445-1545 hrs	SESSION 4 impacts of permeation on shelf-life, Migrations/ Leaching/Scalping	Prof C S Purushothaman
1545-1615 hrs	DAY SUMMARISING / DAY'S TOPIC DISCUSSION	Prof C S Purushothaman

DAY 2 – 17/12/2019:

Day 2 – ASLT BASICS STAGE		
1000-1100 hrs	SESSION 1 Shelf-Life- Principles, Factors affecting the shelf life,	Prof C S Purushothaman
1100-1115 hrs	TEA BREAK	
1115-1215 hrs	SESSION 2 Sensory Evaluation/ Analysis Theory	Prof C S Purushothaman
1215-1330 hrs	LUNCH	
1330-1430 hrs	SESSION 3 Sensory Evaluation/ Analysis Practice	Prof C S Purushothaman
1430-1445 hrs	TEA BREAK	
1445-1545 hrs	SESSION 4 Sensory Evaluation/ Analysis Practice	Prof C S Purushothaman
1545-1615 hrs	DAY SUMMARISING / DAY'S TOPIC DISCUSSION	Prof C S Purushothaman

10:00 am – Session starts (Venue – School of Packaging Seminar Hall 2nd floor)

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DAY 3 – 18/12/2019:


Day 3 – ASLT THEORY STAGE		
1000-1100 hrs	SESSION 1 Shelf-Life- Various models , ASLT Concept	Prof C S Purushothaman
1100-1115 hrs	TEA BREAK	
1115-1215 hrs	SESSION 2 ASLT STAGE 1 Product Study	Prof C S Purushothaman
1215-1330 hrs	LUNCH	
1330-1430 hrs	SESSION 3 ASLT STAGE 2 Packaged Product Study	Prof C S Purushothaman
1430-1445 hrs	TEA BREAK	
1445-1545 hrs	SESSION 4 ASLT STAGE 3 Interpretation	Prof C S Purushothaman
1545-1615 hrs	DAY SUMMARISING / DAY'S TOPIC DISCUSSION	Prof C S Purushothaman

10:00 am – Session starts (Venue – School of Packaging Seminar Hall 2nd floor)

DAY 4 – 19/12/2019:

Day 4 – ASLT CASE STUDY NUMERICAL		
1000-1100 hrs	SESSION 1 Describing Case Study	Prof C S Purushothaman
1100-1115 hrs	TEA BREAK	
1115-1215 hrs	SESSION 2 Participants working on Case Study	Prof C S Purushothaman
1215-1330 hrs	LUNCH	
1330-1430 hrs	SESSION 3 Participants working on Case Study	Prof C S Purushothaman
1430-1445 hrs	TEA BREAK	
1445-1545 hrs	SESSION 4 Participants Presenting Case Study	Prof C S Purushothaman
1545-1615 hrs	DAY SUMMARISING / DAY'S TOPIC DISCUSSION	Prof C S Purushothaman

10:00 am – Session starts (Venue – School of Packaging Seminar Hall 2nd floor)


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DAY 5 – 20/12/2019:

Day 5 – FOOD PACKAGING TECHNOLOGIES		
1000-1100 hrs	SESSION 1 Filling system for Food Packaging	Mrs. Anjali Kapoor
1100-1115 hrs	TEA BREAK	
1115-1215 hrs	SESSION 2 Food Preservation Technique (MAP)	Mrs. Anjali Kapoor
1215-1330 hrs	LUNCH	
1330-1430 hrs	SESSION 3 Specialty Packaging	Mrs. Anjali Kapoor
1430-1445 hrs	TEA BREAK	
1445-1545 hrs	SESSION 4 Caring Active/Intelligent, MAP/CAP	Mrs. Anjali Kapoor
1545-1615 hrs	DAY SUMMARISING / DAY'S TOPIC DISCUSSION	Mrs. Anjali Kapoor

10:00 am – Session starts (Venue – School of Packaging Seminar Hall 2nd floor)

DAY 6 – 21/12/2019:

Day 6 – FOOD PACKAGING TECHNOLOGIES		
1000-1100 hrs	SESSION 1 GMP & HACCP; How to do it?	Prof C S Purushothaman
1100-1115 hrs	TEA BREAK	
1115-1215 hrs	SESSION 2 Food Sterilization packaging Hot filling, Testing for Packaging	Prof C S Purushothaman
1215-1330 hrs	LUNCH	
1330-1430 hrs	SESSION 3 Food Laws and Regulations	Prof C S Purushothaman
1430-1445 hrs	TEA BREAK	
1445-1600 hrs	SESSION 4 Objective based test at the end of the session	Prof C S Purushothaman

10:00 am – Session starts (Venue – School of Packaging Seminar Hall 2nd floor)

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Resource Person:

1. Prof. C. S Purushothaman

233/6099 Pantnagar

Ghatkopar east

Mumbai – 400075

Mob: 9820287264

Email: cspurush@gmail.com

Profile:

Prof. C. S. Purushothaman is a Post Graduate Rank Holder in Chemistry from University of Bombay. Later he qualified himself as an Industrial Engineer and Packaging Technologist from institute in India and abroad is also Qualified Lead Auditor for Quality Management Systems and Six Sigma Black Belt. He completed his industrial training on "Mechanization of Packaging" at Robert Bosch GMBH, Germany. He has studied Packaging Technology in 6 Institutions abroad like EMPA, Switzerland, IvVTNO, Netherlands, PIRA, UK.

He is experience over 52 YEARS covers over 50 YEARS in the field of packaging. He was the Deputy Director at the Indian Institute of Packaging. He has been a member of Standards Drafting Committee on Packaging and Packaging Related Products at the Bureau of Indian Standards he was associated with various International projects which include UNDP, CFTC- SIDA & CFTC projects as Consultant. He has extensively toured around the globe for various projects and had visited more than 28 countries including Iran, Iraq, Saudi Arabia, Ghana, Nigeria, Kenya, Germany, Sweden, Netherlands, Belgium, UK, Korea, Philippines, China, Hong Kong, Thailand etc. for education, market survey, sourcing and as consultant.

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He is an authority in the Packaging of Food Products and Shelf life Studies of these products in the package. He is a Research Guide to M.Sc. (Food Science) students at the Mumbai & SNDT Universities. He has also worked in Multinational like Colgate, Palmolive, Hindustan Unilever as a Senior Development Manager heading the Development and Quality Control. He has rare ability of a Team Builder and as established successful teams in these companies. His Man-Management ability is remarkable. He has been the member of the task force on various crucial projects of the companies on trouble shooting and strategic issues in the field of Packaging and Quality Assurance. He has the unique ability to work in a team and motivate, which is his worthy of mention.

He was instrumental with developing packages, packaging system and testing equipment and has patent to his credit. These patents are the ownership of the organization for which he worked, with, him as the inventor. He was trained in the MNCs subsidiaries in Philippines, Thailand, Hong Kong, and Korea. He was nominated for Advanced Management Programmes by the MNC organisations. He was instrumental global sourcing of moulds and packaging machinery and has played a role of Technical Expert in negotiations with companies in Singapore, Taiwan, Korea and China. He was twice awarded the Colgate Chairman's Global "You Can Make A Difference Award" for his different innovations. He has authored more than 60 papers and articles and he is associated with various educational institutions and forums as a faculty and programme co-coordinator. He is a regular speaker at the Bombay Chamber of Commerce, College of Insurance and NIBM etc on Packaging and Management subjects. He has been a Consultant to Asian Paints, Hindustan Lever, Lakme, Cussons International Limited, Marico, Ahmed Mills, Castrol India, Parle Products etc. In this new assignment as the consultant he has completed following assignment for the clients. (a) Exhibitions conducted for clients in Dubai, Delhi, Germany and Bombay. (b) Market and packaging study for the

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Sector-V, Nerul, Navi Mumbai-400766



client ion Aalsameer (Netherlands. (c) Technical meeting and representation in Mariestad - Sweden, Manchester & London- UK , San Francisco and Chicago - USA, Singapore, Hong Kong, China, Taiwan and Korea.

In the late nineties as per the request of one of his multinational client Castrol India Limited he become an entrepreneur and set up the Crest Packaging Private Limited, in which he is the Founder Managing Director. This organization is Professional Contract Packaging Unit. This company has two units with an investment of Rs. 3.6Crores with a monthly production of 3000 tons of Lubricating Oil. In addition is also a Director of Packaging Professional Group – a Packaging Management Advisory organisation.

All along his passion for academics and research has made him closely associated with various institutions. This passion for academics, has made him took up the position of Full Time Chair Professor Director of SIES School of Packaging and Packaging Technology Centre wherein he has brought in modifications in the academic by bringing out the industrial approach to the academics so that the students passing out are more useful and acceptable to the industries. His objective in the institute is to setup the second line of defence with a group of qualified young professional and later work as their mentor. He was the Programme Director & Chair for the AVERY DESNNISON FOUNDATION USA PROGRAMME at the SIES SCHOOL OF PACKAGING – PACKAGING TECHNOLOGY CENTRE.

He is a Visiting Professor Examiner at the Universities of Mumbai, SNDT and Government of Kerala for MSc Nutraceuticals, MSc Bio-Analytical, MSc (Food Science & Nutrition), MSc (Food Processing & Preservation). He is also a guide for Food Science students for their projects. He is a member of the team for forming the course, Examiner and Moderator at the University of Mumbai. He has been appointed as Consultant to CSIR - CFTRI Mysore (Govt of India) for Shelf Life Studies of Food Projects. He is a member of

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American Society for Quality, Institute of Packaging, International Institute of Risk and Safety Management, UK, National Safety Council- India, Fellow of the Chemical Society of India, Fellow of Institute of Chemist India, and Licentiate of the Federation of Insurance Institute. Presently he is also the TECHNICAL ADVISOR for VINAYAKA FOODS & BEVERAGES – Cochin and ARTOCARPUS FOODS PVT LTD – KANNUR.

2. Mrs. Anjali Kapoor

Flat No 8, First Floor

Punit CHS, Plot No 10/7, Near TATA Press Colony

Nerul, Navi Mumbai- 400706

Email: anjali10feb@yahoo.co.in

Mob: 9870314331


Profile:

B.Sc. (Food Science & Technology) from Guru Nanak Dev University, Amritsar-university gold medalist, M.Tech Food Technology from Punjab Agriculture University-university gold medalist

➤ Worked as **senior faculty and academic coordinator** at **SIES School of Packaging, Nerul** where she managed and ensured smooth conduct of academic programmes, part time, full time & distance learning courses. Provided mentorship and guidance to students on student seminars and project

➤ **Assistant professor** in food technology department and handled M.Sc (Food Technology) in **Rai University, Belapur.**

➤ **Lecturer** in Food Technology Department for B. Tech in **DAV College Jalandhar city.**


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- Presently undertaking consultant with academic institutes and various industrial bodies in the field of food technology.

Daywise Report of the STTP:

Day 1:

Day 1 of the short term training program started with inauguration. Mr. Ainin Shahidi, Director of SIES School of Packaging, Prof C S Purushothaman Managing Director, Crest Packaging were invited as chief guest for the inauguration ceremony.

After inauguration the Prof. C S Purushothaman started with the session on Food Packaging Basics where he covered food packaging requirements, classifications of food, factors affecting food quality, concepts of permeation. The day ended with question answer session where the speaker clarified the doubts of all the participants.

Day 2:

On the second day, he covered the basic principles of shelf life, sensory evaluation as a tool for shelf life estimation of food product, the different methods of analysis of sensory evaluation. Sensory evaluation practical session was conducted for the participants where the participants were given two similar samples for the analysis based on different criterion. This activity was well received by the participants and they could understand how to carry out sensory evaluation of different products and what are the criterion to be considered for the analysis.

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Day 3:

On third day, the Shelf life basic principles were covered. Accelerated Shelf Life Testing (ASLT) principles and procedure was covered. Different stages of ASLT was covered. The varied doubts of participants from academic institutes and industries was solved on that day.

Day 4:


On day 4, problems were solved on Shelf Life Estimation of a product. Wherein all participants were provided with the handouts of the problem statement and graphsheets. Participants were made to solve the problem and analyse the results.

Day 5:

On day 5, Mrs. Anjali Kapoor covered the factors affecting the food quality, the deteriorative reactions, enzymatic browning. Requirement of packaging technology to extend the deteriorative reactions, different packaging technologies: Retort, Gas flushing, active packaging, modified atmosphere packaging, controlled atmosphere packaging. The session was very useful as she quoted many examples.

Day 6:

The first half of the day 6 was on HACCP, GMP, Food Laws and Regulations. During the second half, participants were taken for a lab tour, followed by the objective test. All participants gave the objective test. The test comprised of 50 objective type questions based the topics covered, and participants had to answer within 30 min. All participants performed well in the test. The session ended with Validictory Function, where all the participants were given the college level certificates.


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Photographs of the program



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REPORT ON ONE WEEK ISTE APPROVED STTP ON
Application of Object Oriented Programming in Mechanical Engineering
DEPARTMENT OF MECHANICAL ENGINEERING

16 DEC 2019 to 21 DEC 2019

The importance of programming language in Mechanical Engineering is growing as the latest trend is on Artificial Intelligence. The application of AI in manufacturing industry makes it compulsory to the Mechanical Engineer to develop programs that would interface with machines through sensors. In context of Industry 4.0, programming skills are must nowadays. In view of this, the STTP covers Object Oriented Programming and its applications to Mechanical Engineering field. C programming is structured programming language and is valuable for establishing the equipment user interface applications. Object oriented programming provides numerous problems and their solutions in the areas of mechanical engineering, electrical engineering, heat transfer, fluid mechanics, physics, chemistry and more.

The Department of Mechanical Engineering therefore planned the STTP on object oriented programming and was approved by AICTE-ISTE. The STTP was organised to enhance the hands-on skills of the faculty in programming, who in turn can produce learned Graduates. This was ensured by the success of participants in the test conducted at the end of STTP. A total of 13 participants from the host and other institute attended the STTP.

Day 1: 16/12/2019

The inauguration ceremony began with Guru Vandana followed by brief introduction about the STTP by Head of Mechanical Engineering Department, Dr R. S. Nehete. Dr Atul N. Kemkar Principal SIES GST, then voiced his words of guidance to the participants.

Finally, Mr. Mohammad Ali Ansari presented vote of thanks to the Management of SIES, Princippal and organisers of the STTP and participants followed by the National Anthem.


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The technical session of the day started with introduction to C language and simple programs by Prof. Suwarna Chaure. Further the in depth program were explained by speaker and those were run on Dev C++ software by all the participants.

Day 2: 17/12/2019

Prof. Anindita Khade started the session by introduction to object oriented language. The difference in writing the syntax in C++ was explained. Programs on different applications were compiled and run by the participants. The difference in both languages was made clear through various examples and programs.

Day 3: 18/12/2019

The day three started with the revision of earlier two days and a simple program on matrix multiplication. Prof. Pranjali Thakre, explained the topics in object oriented language inheritance, Polymorphism and Exceptions. Hands on sessions developed confidence in the participants to write programs and execute those.

Day 4: 19/12/2019

After gaining the basic knowledge of programming, the day 4 was application to Mechanical Engineering. Dr. Pradip Patil conducted the sessions in which the mechanical system were analysed from programming point of view. Session on kinematic analysis was conducted to understand the change in programming during motion of the parts and mechanisms. The last session was focussed on simulating the mechanisms using object oriented language.

Day 5: 20/12/2019

Use of TinkerCAD software to build system was demonstrated by Prof. Chandan Chaudhari. The next session was on the interfacing of different sensors and actuators with the software and programming. Further session were hand on training to design various automation system.


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Day 6: 21/12/2019

Mr. Sachin K. from CAD centre demonstrated the application of object oriented programming language in Mechanical Engineering applications. A case study to design parts subjected to static loading was demonstrated. The applications of cotter joint and knuckle joint was considered in the case study. Further few examples of shaft design using C program were also demonstrated. STTP was concluded by collecting participants' feedback, giving attendance certificate to participants and vote of thanks by the STTP coordinator Mr Prashant K. Ambadekar.

Feedback from the participants was analysed and they learned to program by use of C++ language. The knowledge can be utilised in Mechanical oriented problems. Participants were enriched in knowledge on C and C++ as expressed by them in their opinion about the workshop.

Resource Person Invited from Outside Institute:

1. **Mr. Sachin K.**, Milestone Institute of Technology, Thane, Mumbai

Resource Person Invited from Computer Engineering Department:

1. **Ms. Suwarna Chaure**, Assistant Professor, SIES GST, Navi Mumbai
2. **Ms. Anindita Khade**, Assistant Professor, SIES GST, Navi Mumbai
3. **Ms. Pranjali Thakre**, Assistant Professor, SIES GST, Navi Mumbai

Department Resource Person:


1. **Dr. Pradip Patil**, Associate Professor (Mechanical Engineering Department) SIESGST
2. **Mr. Chandan Chaudhari**, Assistant Professor (Mechanical Engineering Department) SIESGST



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Gallery:




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SIES Graduate School of Technology
Department of Mechanical Engineering
AICTE-ISTE Approved one Week Short Term Training Program

on
Application of Application of Object Oriented Programming in Mechanical Engineering
(December 16-21, 2019)
Program Schedule

S.N.	Session 1 (9:30a.m. – 11:00 a.m.)		Session 2 (11:15a.m. – 01:00p.m.)		Session 3 (02:00p.m. – 03:30 p.m.)		Session 4 (03:45p.m. – 04:45 p.m.)
MONDAY (16/12/2019)	Inauguration	TEA BREAK	Introduction to C Programming (Prof. Suwarna Chaure)	LUNCH BREAK	Functions and Pointer (Prof. Suwarna Chaure)	TEA BREAK	Array and String (Prof. Suwarna Chaure)
TUESDAY (17/12/2019)	Object-Oriented Terminology (Prof. Anindita Khade)		Functions and Variables (Prof. Anindita Khade)		Classes in C++ (Prof. Anindita Khade)		Operator Overloading (Prof. Anindita Khade)
WEDNESDAY (18/12/2019)	Polymorphism (Prof. Pranjali Thakre)		Inheritance (Prof. Pranjali Thakre)		File Input and Output (Prof. Pranjali Thakre)		Exceptions (Prof. Pranjali Thakre)
THURSDAY (19/12/2019)	Introduction to Mechanical System (Dr. Pradip Patil)		Analysis of Mechanical System (Dr. Pradip Patil)		Kinematic Analysis (Dr. Pradip Patil)		Simulation in C++ (Dr. Pradip Patil)
FRIDAY (20/12/2019)	Introduction to Tinker CAD software (Prof. Chandan Chaudhari)		Interfacing of various sensors and actuators (Prof. Chandan Chaudhari)		Design of automation system (Prof. Chandan Chaudhari)		Design of automation system (Prof. Chandan Chaudhari)
SATURDAY (21/12/2019)	Case Study (Mr. Sachin K.)		Case Study (Mr. Sachin K.)		Discussion Forum and Test (Mr. Sachin K.)		Valedictory Function

Following participants attended the STTP and have successfully cleared the test conducted at the end of the program.

S.N.	Name of Participant	ISTE Membership no.
1	Dr Rupendra S. Nehete	LM 98144
2	Dr Pradip P. Patil	LM120417
3	Mr Prashant K. Ambadekar	LM 55779
4	Dr Kaustubh V. Chavan	LM 120729
5	Mr Siddique Ahmed	LM 72649
6	Mr Ganesh S. Kadam	LM 120418
7	Mr Ajay S. Hundiwal	LM 120731
8	Mr Lokpriya K. Gaikwad	LM 120420
9	Mr Chandan D. Chaudhari	LM 120730
10	Mr Onkar V. Potadar	LM 120416
11	Ms Prajakta L. Kane	LM 118749
12	Mr Mohammad Ali Ansari	LM 121870
13	Mr Sunil P. Jadhav	LM 81064




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Result Sheet of Successful Participants

A MCQ type paper was set containing 20 questions. The scores of all participants are given below. All the participants have successfully cleared the exam.


S.N.	Name of Participant	Marks Awarded
1	Dr Rupendra S. Nehete	16
2	Dr Pradip P. Patil	15
3	Dr Kaustubh V. Chavan	17
4	Mr Chandan D. Chaudhari	15
5	Mr Ajay S. Hundiware	14
6	Mr Ganesh S. Kadam	15
7	Ms Prajakta L. Kane	14
8	Mr Lokpriya K. Gaikwad	17
9	Mr Prashant K. Ambadekar	14
10	Mr Onkar V. Potadar	17
11	Mr Siddique Ahmed	14
12	Mr Mohammad Ali Ansari	16
13	Mr. Sunil P. Jadhav	15


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Details of Resource Person:

The details of the resource person are provided below:

S.N.	Name of Person invited	Designation	Organisation	Address	Contact Details
1.	Mr. Sachin K.	Software Expert	Milestone Institute of Technology	507, Paradise Tower, 5th Floor, Gokhale Road, Naupada-Thane West, Thane - 400602	8451083555
2.	Ms. Suwarna Choure	Assistant Professor (Department of Computer Engineering)	SIES GST	Sri Chandrasekarendra Saraswati Vidyapuram Sector-V, Nerul Navi Mumbai - 400706	9769455405
3.	Ms. Anindita Khade	Assistant Professor (Department of Computer Engineering)	SIES GST	Sri Chandrasekarendra Saraswati Vidyapuram Sector-V, Nerul Navi Mumbai - 400706	9769843248
4.	Ms. Pranjal Thakare	Assistant Professor (Department of Computer Engineering)	SIES GST	Sri Chandrasekarendra Saraswati Vidyapuram Sector-V, Nerul Navi Mumbai - 400706	9730673899
5.	Dr. Pradip Patil	Associate Professor (Department of Mechanical Engineering)	SIES GST	Sri Chandrasekarendra Saraswati Vidyapuram Sector-V, Nerul Navi Mumbai - 400706	9869829395
6.	Mr. Chandan Chaudhari	Assistant Professor (Department of Mechanical Engineering)	SIES GST	Sri Chandrasekarendra Saraswati Vidyapuram Sector-V, Nerul Navi Mumbai - 400706	9870335652



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Department of Humanities and Applied Sciences
Event Report

Use of "UBUNTU" open source operating system industry

(JULY 20, 2018)

Event Information	
Event Type: FDP	
Event title: <i>Use of "UBUNTU" open source operating system</i>	
Resource Person: Prof Rizwana, HOD CE department, SIESGST, Nerul. Prof Aparna, Associate Professor, CE department, SIESGST Nerul.	
Event date: From: July 20, 2019	To: July 20, 2019
Organized for: Teaching Faculty of Department of Humanities and Applied Sciences	
Organized by: Vijaya Pradip Patil	
Target audience (branch & nos.): Teaching Faculty of Department of Humanities and Applied Sciences. Total 11 in number	
Attachments: 1. Photographs (in JPEG/PNG) 2. Attendance report 3. Feedback	


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Event Description

It is important to realize that any trainer needs two separate sets of skills and knowledge.

Training is a process of acquiring knowledge, skills, and attitude that are needed to fill the gap between what people want to do, and what they can do now.

In order to teach a trainer how to train well, a learning by doing approach is best.

In the beginning Prof Rizwana and Prof Aparna had explained us the difference between the Windows and Ubuntu.

- The fundamental difference between the Windows and Ubuntu is nature of kernel it provides.
- Ubuntu is completely free and available as open source while one needs to pay for Windows.
- Ubuntu does not support executable files (.exe) so, mostly it is virus free OS while Windows is not.
- Ubuntu Desktop OS can also work as server, but Windows Desktop OS does not support server.
- Ubuntu supports multiple desktop environment while Windows does not.
- Ubuntu installation is quite complex process while Windows OS installation is very simple.
- Ubuntu OS comes with many useful software like Office while one must separately install MS Office in Windows.
- Ubuntu OS has its own software manager while Windows does not have that.
- Ubuntu OS normally installs the software and tools by terminal while Windows does that by simple installation package and instructions.
- According to me, Ubuntu is not so friendly OS as Windows is. Ubuntu on the other hand does not support most software that Windows supports.


We have discussed the following points in detail:

What is Linux?

- Linux (often pronounced lee-nucks) is an operating system that was designed to provide personal computer users a free or very low-cost operating system comparable to traditional and usually more expensive operating systems
- Linux is a remarkably complete operating system, including a graphical user interface, complete networking and peripheral devices support. It is distributed using the Free Software Foundation's copyleft stipulations
- Linux is suggested as a possible publicly-developed alternative to the desktop predominance of Microsoft Windows. Although Linux is popular among users it still remains far behind Windows in popularity with end-users

What is Ubuntu?

- Ubuntu (pronounced oo-BOON-to) is a Linux-based operating system that is open sourced (free)
- Ubuntu is an African concept meaning "humanity towards others"
- Ubuntu is sponsored by Canonical Ltd. owned by South African billionaire Mark Shuttleworth – the Ubuntu creator


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Why Ubuntu?

- Ubuntu has strong focus on usability and ease of installation
- Ubuntu comes with lots of programs preinstalled (OpenOffice, Firefox web-browser, games, tweak tools)
- Ubuntu is free

System requirements

- 256 Mb RAM
- 3 Gb hard drive space
- Can be dual booted with current OS or used from a live CD in a fully efficient mode

Summary

Pro:

- Open source (and free)
- Every 6 months upgrade available
- Compatible with MS programs
- Many add-ons available
- No key codes, activation, registration
- High performance. No slower PC!
- New generation of desktop themes
- Long term excellent no-wait support
- No viruses almost
- Fast release cycle

Con's:

- Drivers for peripherals are not always available
- PC games are not compatible
- No non-free video and audio codec's preinstalled (mp3, mp4, divx, ffdshow)
- Not all PC programs are compatible

We all have solved the following exercise:

Introduction to LibreOffice

1. Create a new file and generate your resume using writer
2. Open a new document and write a notice for students for the exam with the table for exam. Insert image as a logo of SIES GST and appropriate header and Footer.
3. Create a spreadsheet using Calc which gives details of the marks obtained by student in test1 and test2 of various subjects of First year engineering.
 - a. Sort students according to their test marks of one subject
 - b. Mark students with red colour for students securing less than 8 marks
(select the cells for which to apply condition, use format menu conditional formatting, condition, specify the condition, select apply new style in that select font colour)

- c. Create a graph/chart depicting the result in terms of first class second class and pass class.
4. Create a presentation to introduce your subject to the students specifying learning objectives in first slide, Insert Image of your favourite author, in the bulleted form give references.


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1. Photographs (in JPEG/PNG)



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2. Attendance report (Scanned copy)

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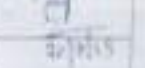
Department of Humanities and Applied Sciences

Faculty Development Program

ATTENDANCE SHEET

Topic:

"Use of Ubuntu, Open Source Operating System" Date: 20 July 2019

No.	Name of the Faculty	Signature
1.	Dr. Manoj Kulkarni	
2.	Mr. Anuraj	
3.	Mr. Suresh Khan	
4.	Mr. Vignesh Patel	
5.	Mr. Parthiv Sharma	
6.	Mr. Anshika Bhambhani	
7.	Mr. Mahesh Bhandari	
8.	Mr. Nandini Patil	
9.	Dr. Geetanjali Mishra	
10.	Dr. Sushma V. Kulkarni	
11.	Dr. Sushma Kulkarni	
12.	Dr. G. Kulkarni	
13.	Dr. Anshika Kulkarni	
14.	Dr. Rishika Bhandari	
15.	Mr. Anshika Bhandari	
16.	Dr. Anshika Bhandari	


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3. Feedback Report (Scanned copy)

SIES GRADUATE SCHOOL OF TECHNOLOGY, NERUL

Humanities and Applied Sciences Department

Date: 20/07/2019

A seminar cum hands on workshop was organized for the faculty members of Humanities and Applied Sciences department of SIES GST:

Use of "UBUNTU" open source operating system

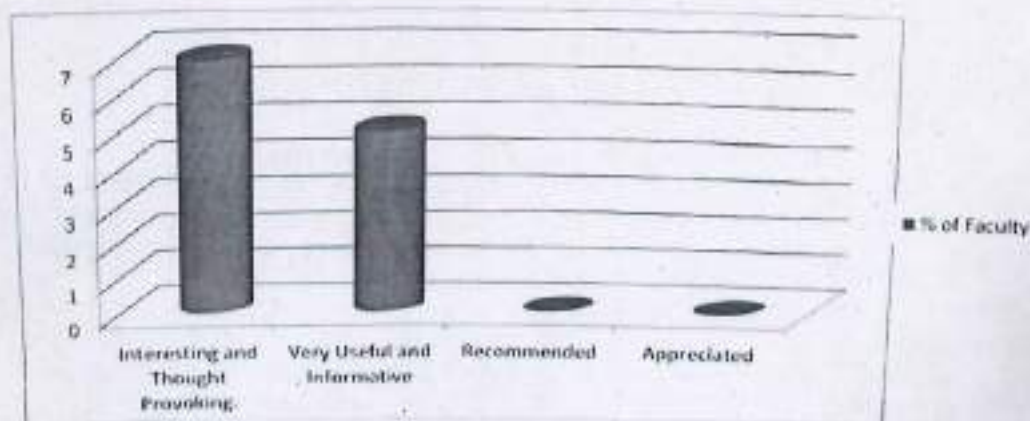
Experts: Prof Rizwana, HOD CE department, SIESGST, Nerul.

Prof Aparna, Associate Professor, CE department, SIESGST Nerul.

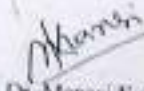
was organized for the faculty members of Humanities and Applied Sciences on July 20, 2019.


Total of 11 faculties have attended the seminar from the department.

Consolidated feedback of the Faculty Members




Vijaya Patil
FDP Coordinator


Dr. Manasi Karkare
Dean and Head of the Department


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Impact Analysis:

Prof Rizwana and Prof Aparna enlightens the faculty members on the following objectives and we have got the learning outcomes as follows:


Objectives of the program:

- To make participants aware of open Source Operating System
- To Aware various features of ubuntu
- To aware and Use LibreOffice for the official Work

Learning Outcome of the program:

- Learners will know
- Booting of operating system
- Storing the user created documents in specific location
- to make use of LibreOffice for day to day work

Overall Prof Rizwana and Prof Aparna accomplished to make us understand and learn the difference between Windows and Ubuntu, similarly able to use the LibreOffice efficiently.


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