

Mini Project and Seminar(304196)

Teaching Scheme:

Practical: 4 Hrs/Week

Examination Scheme:

Oral Examination: 50 marks

Course Objectives:

- To undertake & execute a Mini Project through a group of students.
- To understand the 'Product Development Cycle' through Mini Project.
- To plan for various activities of the project and distribute the work amongst team members.
- To learn budget planning for the project.
- To inculcate electronic hardware implementation skills by -
 - a. Learning PCB artwork design using an appropriate EDA tool.
 - b. Imbibing good soldering and effective trouble-shooting practices.
 - c. Following correct grounding and shielding practices.
 - d. Knowing the significance of aesthetics & ergonomics while designing electronic product.
- To develop student's abilities to transmit technical information clearly and test the same by delivery of Seminar based on the Mini Project.
- To understand the importance of document design by compiling Technical Report on the Mini Project work carried out.

Course Outcomes:

After successfully completing this course, the student shall be able to:

- Understand, plan and execute a Mini Project with team.
- Implement electronic hardware by learning PCB artwork design, soldering techniques, trouble shooting etc.
- Prepare a technical report based on the Mini project.
- Deliver technical seminar based on the Mini Project work carried out.

Guidelines:

- Project group shall consist of not more than 3 students per group.
- Suggested Plan for various activities to be monitored by the teacher.
Week 1 & 2: Formation of groups, Finalization of Mini project & Distribution of work.
Week 3 & 4: PCB artwork design using an appropriate EDA tool, Simulation.
Week 5 & 6: Hardware assembly, Testing
Week 7 & 8: Enclosure Design, Fabrication etc
Week 9 & 10: Preparation, Checking & Correcting of the Draft Copy of Report
Week 11 & 12: Demo and Group presentations
- Mini Project Work should be carried out in the Projects Laboratory.
- Project designs ideas can be necessarily adapted from recent issues of electronic design magazines Application notes from well known component manufacturers may also be referred.
- Hardware component is mandatory.

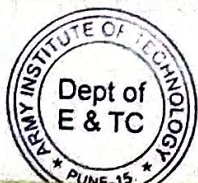
- Layout versus schematic verification is mandatory.
- Domains for projects may be from the following , but not limited to:
 - Instrumentation and Control Systems
 - Electronic Communication Systems
 - Biomedical Electronics
 - Power Electronics
 - Audio , Video Systems
 - Embedded Systems
 - Mechatronic Systems
- Microcontroller based projects should preferably use Microchip PIC controllers.
- A project report with following contents shall be prepared:
 - Title
 - Specifications
 - Block diagram
 - Circuit diagram
 - Selection of components
 - Simulation results
 - PCB artwork
 - Layout versus schematic verification report
 - Testing procedures
 - Enclosure design
 - Test results
 - Conclusion
 - References

For the enhancement of Technical Communication Skills, it is advised to refer to the following or any other good book.

1. Meenakshi Raman, Sangeeta Sharma, ' Technical Communication, Principles and Practice', Oxford University Press
2. M Ashraf Rizvi, ' Effective Technical Communication', Tata McGraw Hill Education Pvt. Ltd.
3. C Muralikrishna, Sunita Mishra, ' Communication Skills for Engineers', Pearson

Army Institute of Technology
Mini Project & Seminar
Class TE-Div-A
Project Titles & Batches (2015-16)

| No. of Groups | Roll no | Exam Seat No. | Name of students | Titles | Batch | Faculty |
|---------------|---------|---------------|--------------------|-----------------------------------|-------|-----------------------------|
| Group 1 | 1301 | T120223001 | Aakash Jha | Automated car parking indicator | A1 | Manisha Nilkanth |
| | 1361 | T120223092 | Saqib Ali | | | |
| Group 2 | 1302 | T120223002 | Abhijit Hycinth | Smart helmet | | |
| | 1304 | T120223005 | Aditya Shekhawat | | | |
| | 1332 | T120223045 | Hanish Patial | | | |
| Group 3 | 1303 | T120223003 | Abhishek B | Speed Estimator for Highway | | |
| | 1312 | T120223014 | Amit Kumar K | | | |
| | 1313 | T120223016 | Anandvikram Singh | | | |
| Group 4 | 1307 | T120223008 | Aakash Bisht | GSM based notice board | | |
| | 1308 | T120223011 | Akshay Dorle | | | |
| | 1353 | T120223036 | Dhruv Khosla | | | |
| Group 5 | 1309 | T120223012 | Akshay Kumar | Virtual Waiter | | |
| | 1310 | T120223013 | Amarjit Singh | | | |
| | 1359 | T120223086 | Rohan Sutar | | | |
| Group 6 | 1347 | T120223024 | Asang kumar singh | Water impurity Detector | | |
| | 1356 | T120223009 | Akash Singh | | | |
| | 1358 | T120223094 | Shahrukh Khan | | | |
| Group 7 | 1314 | T120223017 | Anil Kumar Yadav | Mop Clinear | A2 | Snehal Marathe & J B Jawale |
| | 1325 | T120223035 | Deepesh Kumar | | | |
| | 1326 | T120223037 | Dinesh Kumar | | | |
| Group 8 | 1315 | T120223019 | Ankit kumar Singh | Wearable Anti Drowning device | | |
| | 1316 | T120223021 | Anuj Gautam | | | |
| | 1322 | T120223031 | Babita | | | |
| Group 9 | 1317 | T120223022 | Archana Kumari | Vehicle Control using Android APP | | |
| | 1324 | T120223034 | Coca Vaishnavi | | | |
| | 1357 | T120223068 | Pooja More | | | |
| Group 10 | 1318 | T120223023 | Arunima Sasidharan | Bluetooth Security Tags | | |
| | 1320 | T120223028 | Atul Parihar | | | |
| | 1360 | T120223018 | Anjali Singh | | | |
| Group 11 | 1319 | T120223027 | Ashutosh Mishra | Automatic Pollution Check | | |
| | 1321 | T120223030 | Avinash Katwal | | | |
| | 1323 | T120223032 | Balwant Bishnoi | | | |



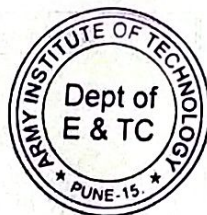
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|----------|------|------------|-------------------|--|----|----------------|
| Group 12 | 1311 | T120223015 | Amit Kumar B | Water Tank Filling System | A3 | Snehal Marathe |
| | 1327 | T120223038 | Gajendra Singh | | | |
| | 1331 | T120223044 | Gulshan kumar | | | |
| Group 13 | 1333 | T120223046 | Harkesh Kumar | Auditorium Lighting Control through IR Remote | | |
| | 1339 | T120223055 | Manish | | | |
| | 1341 | T120223057 | Manoj Kumar Singh | | | |
| Group 14 | 1330 | T120223043 | Govind Kumar | Password Based Circuit Breaker | | |
| | 1335 | T120223048 | Himanshu | | | |
| Group 15 | 1305 | T120223006 | Adya Dass | Street light that Glow on Vehicle movement Detection | | |
| | 1328 | T120223039 | Garaga Ramya | | | |
| Group 16 | 1336 | T120223049 | Jasmine Cheema | Tongue Controlled Wheel Chair | | |
| | 1338 | T120223054 | M Vaishnavi | | | |
| Group 17 | 1306 | T120223007 | Ashiwarya Jagani | Accelerometer Based Hand Gesture Controlled | | |
| | 1329 | T120223040 | Gaurav Kumar | | | |
| | 1337 | T120223051 | Kamal Kishore | | | |

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|----------|------|------------|-----------------|-------------------------------|----|------------------|
| Group 18 | 1334 | T120223047 | Harpreet | City Bus Prototype | A4 | Manisha Nilkanth |
| | 1345 | T120223090 | sapan | | | |
| | 1362 | T120223075 | Priyanka Patil | | | |
| Group 19 | 1340 | T120223056 | Manish Kumar | Solar Mains Switch | | |
| | 1348 | T120223076 | Raghavendra Rai | | | |
| | 1350 | T120223041 | Gaurav sharma | | | |
| Group 20 | 1342 | T120223059 | Monalisha | Intelligent garbage collector | | |
| | 1349 | T120223085 | Ritu Dubey | | | |
| | 1352 | T120223025 | Aahish Panchal | | | |
| Group 21 | 1346 | T120223109 | Taranjeet Kaur | Energy efficient smart house | | |
| | 1351 | T120223020 | Annu Kumari | | | |
| Group 22 | 1343 | T120223003 | Abhishek Bhujel | Ultrasonic Blind Stick | | |
| | 1344 | T120223113 | Varun Bhisara | | | |
| | 1363 | T120223117 | Vipin Chavan | | | |

Faculty Incharge

- 1.Manisha Nilkanth
- 2.Snehal Marathe



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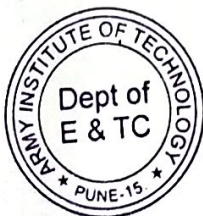
Army Institute of Technology
Mini Project & Seminar
Class TE-Div-B
Project Titles & Batches (2015-16)

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|-----------------|------|------------|--------------------|--|----|---------------|
| Group 23 | 5301 | T120223060 | Mritunjya Kaushal | Wearable Safety Device | B1 | Avinash Patil |
| | 5308 | T120223067 | Parul Upadhayay | | | |
| | 5311 | T120223072 | Prerit Bhatnagar | | | |
| Group 24 | 5302 | T120223061 | Naresh Kumar | Health Monitoring System using GSM and Arduino | | |
| | 5303 | T120223062 | Naveen | | | |
| | 5304 | T120223063 | Nithin Raj V | | | |
| Group 25 | 5305 | T120223058 | Noah Rahul | Voice controlled Rescue BOT | | |
| | 5306 | T120223064 | Noyanka Binda | | | |
| | 5310 | T120223070 | Pranav Ballewar | | | |
| Group 26 | 5307 | T120223065 | Pankaj | Automatic Gas Booking & Detection | | |
| | 5313 | T120223077 | Rahul Singh | | | |
| | 5358 | T120223033 | Bitoo Singh | | | |
| Group 27 | 5309 | T120223069 | Prakhar Godbole | Alcohol Detector | | |
| | 5312 | T120223073 | Priya Kumari | | | |
| | 5357 | T120223053 | Kiran Shinde | | | |
| Group 28 | 5325 | T120223096 | Shashank Upadhyay | Smart Office with face Recognition Technology | | |
| | 5323 | T120223093 | Saurav Kumar | | | |
| | 5326 | T120223097 | Shavra ayub shah | | | |
| Group 29 | 5315 | T120223080 | Rakesh Rai | BEACON | B2 | Mahesh Patil |
| | 5317 | T120223083 | Ravi Kumar Singh | | | |
| | 5318 | T120223084 | Ravi Shankar Joshi | | | |
| Group 30 | 5319 | T120223087 | Samant Kumar | Mess Management using RFID | | |
| | 5320 | T120223088 | Sandeep Kumar | | | |
| | 5360 | T120223071 | Pratik Kumar Singh | | | |
| Group 31 | 5321 | T120223089 | Gautam sanjeev | Oil Theft Detection System | | |
| | 5322 | T120223091 | Saqub Hussain Khan | | | |
| | 5329 | T120223099 | Shivam Bhatt | | | |
| Group 32 | 5331 | T120223104 | Subhash Bishnoi | Smart Irrigation | | |
| | 5335 | T120223110 | Ujjaval | | | |
| | 5330 | T120223103 | Subham kumar | | | |
| Group 33 | 5332 | T120223105 | Suraj prakash | CNC Mini Plotter | | |
| | 5316 | T120223082 | Rashmi | | | |
| | 5314 | T120223079 | Rajesh sahu | | | |
| Group 34 | 5333 | T120223106 | Suraj Singh | Library Management System using RFID Tags | | |
| | 5336 | T120223111 | V Dinesh Kumar | | | |
| | 5341 | T120223119 | Vishwajit Singh | | | |

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|----------|------|------------|-------------------|--|----|---------------|
| Group 35 | 5337 | T120223112 | Varnita sharma | Automatic water control Machanism | B3 | Avinash Patil |
| | 5339 | T120223115 | Vikas Kumar singh | | | |
| | 5340 | T120223116 | Vikas yadav | | | |
| Group 36 | 5328 | T120223102 | Stuti Pradhan | Automated Lawn Mover | | |
| | 5356 | T120223081 | Rani Devi Rawat | | | |
| | 5324 | T120223095 | Shalina Shreshta | | | |
| Group 37 | 5327 | T120223100 | Shivin Pant | LED CUBE | | |
| | 5234 | T120223108 | Tanishq Sethi | | | |
| Group 38 | 5346 | T120223050 | Jayant Janewa | GSM Based Notice Board | | |
| | 5338 | T120223114 | Vijayant Mehala | | | |
| | 5359 | T120223078 | Rahul Bhadauria | | | |
| Group 39 | 5344 | T120223066 | Paramvir singh | Prepaid Meter (Smart Energy meter) | | |
| | 5345 | T120223029 | Avinash | | | |
| | 5355 | T120223026 | Ashok Choudhary | | | |
| Group 40 | 5347 | T120223074 | Priyanka Bisht | Voice Controlled Wheel Chair(Prototype) | B4 | Sushma Wadar |
| | 5354 | T120223052 | Karishma | | | |
| Group 41 | 5343 | T120223121 | Yogender Kumar | ODD-EVEN using RFID and GSM | | |
| | 5349 | T120223118 | Vipin Kumar sinha | | | |
| | 5350 | T120223010 | Akash singh | | | |
| Group 42 | 5342 | T120223120 | Vivek singh | RFID based Attendance mangement system | | |
| | 5353 | T120223042 | Gokul | | | |
| | 5352 | T120223098 | Shiv singh | | | |
| Group 43 | 5348 | T120223101 | Shristhi Rana | Glove Keyboard | | |
| | 5351 | T120223107 | Sweety | | | |

Faculty Incharge
1.Avinash Patil
2.Sushma Wadar
2.Mahesh Patil

Avinash
Sushma



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