

**MIRANDA HOUSE
UNIVERSITY OF DELHI
DBT Star College Project**

List of Short term training courses/workshops conducted for students

1. Introduction to micro-controller Arduino UNO 1.0. 6-7 March 2019 and 29 September 2018 This workshop is a series of workshops designed for students to get an idea of Arduino's potential, introduce students to its magical world. Learning the basics is easy because it is open source and reaching out to learners lead to many innovative projects.
2. Vigyanshala: Workshop on WaterScope 10 January 2019
The workshop was primarily based on water cleaning techniques and the achievements of WaterScope- a startup that is being nurtured in University of Cambridge.
3. Hands on Students workshop was organized by Department of Zoology on "An Insight into Zebra Fish Development". This workshop was attended by 30 students of B.Sc. (Hon) Zoology III year on 20 February 2019 and 35 students of B.Sc. Life Science I year on 2 April 2019
4. Hands on students workshop on "Spirometry" was organized for 30 students of B.Sc. (Hon) Zoology II year was organized by Department of Zoology on 13 February 2019.
5. Bridge Course on Basic Laboratory Techniques for of B.Sc. Life Sciences I Year 06-07 September 2018
6. Bridge Course on *Basic Laboratory Techniques* for of B.Sc. (Honours) Botany I Year 27-29 August 2018.
7. Bridge Course on *Lab Safety and Handling of Equipment* for B. Sc. (H) Chemistry I Year 2-3 August 2018.
8. Bridge Course on *Lab Safety and Handling of Equipment* for B. Sc. (H) Zoology I Year August 2018.
9. National Science Day Poster and Project Presentations on 28 February 2018. Three projects/posters namely Neuroimaging using fMRI data; Path Planning with Dijkstra and QUARKNET: Detection of cosmic ray muons and the time correlation analysis were presented by the students of Physics Department at the INSA, Delhi.
10. VIGYANshala – Communicate and Inspire Workshop; 5 February 2018; Alumnae Dr. Darshana Joshi from University of Cambridge, UK along with Dr. Aditya Sadhanala and Dr. Robin Lamboll from the same University conducted the workshop. About 40 students from Physics participated in the workshop and interacted with the speakers.
11. Science Conclave: Research on the Frontiers was organized from 10 to 12 January 2018 by the D S Kothari Centre for Research and Innovation in Science Education; Miranda House; University of Delhi. The symposium was attended by 316 students and 36 faculty members across different colleges in the University. Eminent speakers from prestigious

research and academic institutes gave motivational talks on state of the art research topics.

12. Summer Workshop for Undergraduate Science Students, Flavor of Research: Investigative Projects in Multidisciplinary Contexts held at the D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 1 June-15 July 2018
13. Physics department conducted four workshops as part of the Inspire Internship Programme held at the DS Kothari Centre for Research and Innovation in Science Education, Miranda House from 18 to 22 December 2017. The workshops are: 1. The world in motion; 2. Amusement Park Physics; 3: Sense, Measure and Control the World and 4. Robotics: Impacting Life. These workshops were attended by about 204 students from 21 schools and 56 school teachers. About 30 student mentors and 10 faculty members organized this week long event.
14. Hands-on workshop on the Introduction to IoT Technology was organized from 14 to 15 October 2017. About 30 students participated in this workshop.
15. INSEF Regional Science Fair in collaboration with Student Society of India (SSI) was hosted on 13 October 2017. 15 schools were shortlisted for the event and 45 school students presented their projects here.
16. The Big Bang: Unlocking the Secrets of the Universe; Interactive session with Dr. Mick Storr and Dr. Archana Sharma; DS Kothari Centre for Research and Innovation in Science Education and Vidyut, the Physics Society, Miranda House in collaboration with Life Lab Foundation; 2 August 2017. The event was attended by about 250 participants from different colleges in the University.
17. Summer Workshop for Undergraduate Science Students, Flavor of Research: Investigative Projects in Multidisciplinary Contexts held at the D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 1 June-15 July 2017
18. Three workshops were conducted on 3D Printing Techniques on 22 June 2017, 13 June 2017 and 9 February 2017. Students were given training on the two 3D printers available in the Department. About 40 students of the Physics Department participated in each workshop. Each workshop had 40 participants
19. Workshop on Using Geometric Reasoning to Teach Vector Calculus in Mathematics and Physics by Prof. Tevian Dray, Department of Mathematics, Oregon State University and Corrine A Manoque, Department of Physics, Oregon State University on 28 March, 2017. 60 student participants
20. Workshop on Active Engagements: Lessons from Education Research by Prof. Tevian Dray, Department of Mathematics, Oregon State University and Corrine A Manoque, Department of Physics, Oregon State University on 29 March, 2017. 60 student participants

21. Summer Workshop for Undergraduate Science Students, Flavor of Research: Investigative Projects in Multidisciplinary Contexts held at the D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, 1 June-15 July 2016
22. Bridge Course on Laboratory Safety and Handling of Equipment,(62 participants)Department of Chemistry&DS Kothari Centre for Research and Innovation In Science Education, Miranda House, 3-4 August, 2016.
23. Workshop for Beginners on Material Chemistry organized by Innovation Project *MH 306*: Design of affordable water purification devices using green and eco-friendly silver nanoparticles and Department of Chemistry on 27 July 2016.
24. Bridge Course on Basic Laboratory Techniques; D S Kothari Centre for Research and Innovation in Science Education & Department of Botany, Miranda House, 05-06 September 2016
25. Bridge Course on Basic Laboratory Techniques for B. Sc. Life Sciences I Year students, , D S Kothari Centre for Research and Innovation in Science Education & Department of Botany, Miranda House, 07-08 September 2016
26. Workshop titled From Symptom to Identification: Diagnosing Viral Disease in Plants DBT Star College Project and DS Kothari Centre for Research and Innovation in Science Education, Miranda House, March 31- April 1, 2016
27. Bridge Course, Laboratory Instrumentation: Principal, Usage and Applications, Department of Zoology,&DS Kothari Centre for Research and Innovation In Science Education, Miranda House 09 – 12 August, 2016
28. Workshop on Eco-friendly Dyeing and Finishing of Textiles organized by DU Innovation Project *MH 307*, Department of Zoology, 6 October 2016
29. Medical Biotechnology Colloquium, Department of Zoology, Miranda House, 4 November 2016
30. A seminar on Semiconductors for Defence, Dr Poormendu Chaturvedi, Centre Head, Centre for Advanced Semiconductor Technology, SSPL, DRDO, Ministry of Defence, Delhi, 1 March 2017
31. A seminar on Ultra Cold Atoms: A Walk into the Quantum World at Ultra Low Temperatures by Dr. Sankalpa Ghosh, Associate Professor, Department of Physics, IIT, Delhi, 1 March 2017
32. A seminar on Higher Education and Research in Japan 2017 organized by Department of Physics & DS Kothari Centre for Research and Innovation In Science Education, Miranda House, 6 January 2017
33. A seminar on Energy Harvesting by Prof Vinay Gupta, Department of Physics and Astrophysics, University of Delhi, 9 January 2017

34. A seminar on Progress made by India in the Field of Space Research by Prof R. K. Sharma, Karunya University, Coimbatore, 21 October 2016
35. A seminar on Gravitational Waves by Prof Patrick Das Gupta, Department of Physics and Astrophysics, University of Delhi, 22 August 2016

International Events

1. International Muon Week 2018 from 12 to 16 March 2018. Students performed Time of Flight studies, collect data, upload to Quarknet-Lab, and produce a result using e-Lab tools. Hands on sessions were organized, by the Quarknet student team, for students of other science departments of the college to demonstrate the collaborative experiment on 14, 15 and 16 March 2018.
2. International Muon Week 2018 data analysis 26-30 March 2018: video meetings hosted via Fermilab in order to share and discuss results.
3. Solar Eclipse Muon Flux Experiment was conducted in association with Quarknet on 21 August 2017.
4. International Muon Week 2017 was celebrated from 20 to 24 March 2017 with active participation in the worldwide Cosmic Ray Flux Study, in association with FermiLab and Quarknet.
5. International Muon Week 2017, Worldwide Cosmic Ray Flux Study, in association with FermiLab and Quarknet, 20-24 March 2017
6. International Cosmic Day, in association with DESY, Fermilab, Quarknet and NetzwerkTeilchenwelt, 2 November 2016
7. A seminar on Innovation in Science education by Ken Silburn, Founder and Coordinator, iSTEM Australia, 3 August 2016