

# **Memorandum of Understanding (MoU)**

Between

**Technology Applications Service  
(TAS), New Delhi**

And

**Central University of Haryana  
(CUH), Mahendergarh, Haryana**

Dated: 10<sup>th</sup> November, 2017

Place: Central University of Haryana  
(CUH), Mahendergarh, Haryana

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This Memorandum Of Understanding is signed between Technology Applications Service, New Delhi (Herein after called TAS) and Central University of Haryana, Mahendergarh, Haryana ( Herein after called as CUH) on 10.11.2017 at the University Campus in Jant-Pali, Mahendergarh, Haryana. This MoU is in pursuance to the provisions contained in point number 1 of the general points of the earlier MoU dated 24.09.2015.

That the Technology Applications Service is a Delhi based propriety firm working in the fields of (a) Instrumentation Development, (b) Software Development and (c) Training Programmes. TAS is devoted to develop new applications of proven technologies and generates self-employment opportunities. TAS is headed by Dr. R. K. Garg, formerly Scientist, in Council of Scientific and Industrial Research (CSIR) laboratories- Central Electronics Engineering Research Institute (CSIR-CEERI), Pilani and Central Scientific Instruments Organization (CSIR-CSIO), Chandigarh and formerly Associate Professor, University of Reims, France, group leader at CEMES/LOE, Toulouse, France and guest scientist at FHI der MPG, Berlin Germany.

That CUH, is a, NAAC Grade "A" accredited, Central University established by an act of Parliament in 2009 to provide learning environment for the growth and development of students and faculty through innovative programmes by pursuing cutting-edge research, scholarly inquiry, and creative endeavors. Currently CUH is offering various degree and diploma courses to students under recognition from University Grants Commission.

Wheres both parties hereby agree to create synergies between the Department of Physics, Central University of Haryana and Technology Applications Service. The purpose of this MoU is to hone the talent of the Post Graduate (PG) students and Research Scholars and provide them with the skills and hands-on exposure in the field of Electron Optics and thin films.

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## **Objectives of MoU:**

- 1) This undertaking will particularly benefit the final year Post Graduate students equipping them with the technical know-how to design, develop and fabricate filaments-less small and broad beam Ion and Electron sources, specific purpose AC and DC power supplies and Magnetron Sputter Guns for DC/RF systems.
- 2) The MoU will also aim to train the students as part of their PG program in the relevant areas as per their curriculum requirement.
- 3) The MoU will also endeavor to provide guidance for the project work of the M.Sc. Final year students as part of their course work requirement towards fulfillment of their PG degree program.
- 4) The MoU will also explore future possibilities to jointly design, develop and fabricate instruments in the fields of Electron Optics and Electron Spectroscopy.
- 5) The MoU will facilitate collaboration between CUH and TAS to develop a full-fledged Thin Film fabrication and characterization laboratory along with Electron Optics laboratory.

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## **Technology Applications Service (TAS) Obligations:**

- 1) TAS shall provide Training of Trainers (ToT) to faculty members of Central University of Haryana, Mahendergarh, Haryana.
- 2) TAS shall provide their laboratory for conducting at least two workshops of minimum two days duration during one academic year.
- 3) TAS shall provide project work guidance and facilities in their laboratory to the M.Sc. Final year students (five) in the fields of Electron Optics towards part fulfillment of the M.Sc. Degree requirement at the cost of the University/students.
- 4) TAS will conduct training programmes for five students of Central University of Haryana, Mahendergarh, Haryana, at the cost of the University/students.
- 5) TAS shall identify areas for joint collaboration with Department of Physics, Central University of Haryana, Mahendergarh, Haryana to design, develop and fabricate innovative new products based on Electron Optics.
- 6) TAS in collaboration with Department of Physics, Central University of Haryana, Mahendergarh, Haryana will also explore the possibilities of fabricating low cost instrumentation for Thin Film fabrication laboratory and Electron Optics laboratory.
- 7) TAS shall explore the possibilities to provide the blueprint for facilitating and providing academic and technical support to run skill based courses for designing, developing fabricating filament-less small and broad beam Ion and Electron sources, specific purpose AC and DC power supplies and Magnetron Sputter Guns for DC/RF systems, Electron Optics and Software programming and development.
- 8) TAS shall also facilitate student educational trips to reputed laboratories in the field of Electron Optics at the cost of the university/students.

## **Central University of Haryana (CUH), Mahendergarh, Haryana Obligations:**

- 1) CUH shall provide the infrastructure and financial support (travel expenditure (AC-III tier by train/bus/taxi), honorarium (Rs. 1000/- per session of 60 minutes) and hospitality in their guest house that includes boarding and lodging of the faculties/trainers of TAS as per rules of the University) for Training of Trainers (ToT) program to the faculty members.
- 2) CUH shall provide the infrastructure and financial support (travel expenditure (AC-III tier by train/bus/taxi) and accommodation in guest house) to TAS personal for conduction of workshop.
- 3) CUH will provide laboratory facilities as available with it for carrying out M.SC. Students project work.
- 4) CUH will provide travel expenditure (AC-III tier by train/bus/taxi), honorarium (Rs. 1000/- per session of 60 minutes) and hospitality in their guest house that includes boarding and lodging of the faculties/trainers of TAS as per rules of the university for the conduct of the students training programme.
- 5) CUH shall provide infrastructure and space for creating laboratories to design, develop and fabricate instrumentation as mentioned in clause (5) and (6) of TAS obligation.
- 6) CUH will form a committee of course in consultation with TAS to design and develop skill-based courses including course curriculum, learning objective and outcomes and mechanism for evaluation and successful completion of the said courses. CUH will also jointly issue certificates to students who successfully complete the course. The financial implications for such skill based courses shall be jointly worked out between CUH and TAS including revenue sharing formula.

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## General Points:

- 1) The MoU is initially for a period of two years and may be extended beyond two years by mutual consent of both the parties.
- 2) This MoU may be terminated by either party after giving 90 days written notice of its intention to so terminate the MoU. However, notwithstanding the termination of the MoU, both the parties shall continue to remain responsible for the respective obligations in respect of all the activities which might have already been undertaken prior to the termination or then going-on.
- 3) Any dispute arising in the course of the MoU shall be settled amicably and as per the provision of Arbitration Laws in which Director/Proprietor TAS, New Delhi and Vice-Chancellor, CUH, Mahendergarh, Haryana will be the joint arbitrators. The dispute for all such cases shall be in the jurisdiction of Mahendergarh, Haryana.

*RK Garg*

Signed on behalf of TAS ,

New Delhi

(Dr. R. K. Garg)

Director/Proprietor TAS

*M. Maurya 10/11/17*

Signed on behalf of the CUH

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Mahendergarh, Haryana

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(Registrar, CUH)

Mahendergarh, Haryana

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