

**MEMORANDUM OF AGREEMENT**  
**between**  
**THE OHIO STATE UNIVERSITY, COLUMBUS, OHIO, U.S.A**  
**and**  
**ALIGARH MUSLIM UNIVERSITY, UTTAR PRADESH, INDIA**

In accordance with a mutual desire to promote further cooperation in higher education between the United States of America and India, Aligarh Muslim University (hereinafter, AMU), Uttar Pradesh, India and The Ohio State University, Columbus, Ohio, USA enter into this formal agreement pursuant to the award of the grant by the United States India Education Foundation (USIEF) to form a joint partnership under the Obama-Singh 21<sup>st</sup> Century Knowledge Initiative which was signed and became effective 15 July 2013. This Memorandum of Agreement (MOA) is aimed at implementing the terms of the United States India Education Foundation award.

Pursuant to the USIEF award, OSU and AMU have found it mutually beneficial to initiate the following cooperative activities:

1. **Establish** a joint OSU-AMU Center of Excellence in STEM Education and Research (ER) at AMU.
2. **Develop** a novel two-year STEM-ER program for Indian graduate students to train in teaching STEM subjects to under graduate students, as well as to conduct state-of-the-art research.
3. **Award** dual-degrees to selected students, in STEM education at OSU and graduate research at AMU.
4. **Contribute** substantial direct and indirect resources as cost-sharing, equal to or exceeding the amount requested from USIEF, including tuition and fee waiver from OSU for admitted AMU students.
5. **Initiate** interdisciplinary collaborative projects in advanced research and innovation.
6. **Formalize** a comprehensive Indo-US inter-university consortium of leading Indian and U.S. Universities.
7. **Prepare** report on *national capacity building* in STEM faculty training and research in India for submission to governmental and non-governmental agencies to facilitate large-scale Indo-US collaboration.

**RESPONSIBILITY OF THE OHIO STATE UNIVERSITY**

- a) Participating Ohio State Faculty members from the Colleges of Education and Human Ecology, Arts and Sciences, and Engineering, in collaboration with their AMU counterparts, will mentor and design a (2) two-year program to train graduate students in teaching STEM courses at the **undergraduate level**, as well as research on

advanced scientific and technological topics of global importance. This effort by dedicated faculty members at Ohio State will be part of OSU cost sharing.

- b) The Ohio State University Graduate School will contribute a substantial cost-sharing component of this proposal by providing tuition awards and fee allocations for up to four (4) AMU students for two (2) semesters each during one (1) year of their studies at OSU. This financial contribution may total up to approximately **\$120,000** at the current rates for non-resident students enrolled at OSU.
- c) The Ohio State College of Education and Human Ecology, in collaboration with the Colleges of Arts and Sciences and Engineering will develop a dual-degree Master of Educations program with specialization in STEM education.
- d) The Ohio State Office of International Affairs will provide administrative and orientation assistance to AMU students and faculty as part of OSU cost share.

### **RESPONSIBILITY OF THE ALIGARH MUSLIM UNIVERSITY**

In addition to the commitments by our partners at OSU and the USIEF award, AMU agrees to undertake the following steps:

- a) AMU will finalize a Memorandum-of-Agreement with OSU outlining the Statement of Activities laid out in the proposal for mutual benefit.
- b) To take the required steps in furtherance of STEM Education and Research at AMU, the proposed center can function according to the guidelines prepared by the AMU.
- c) Encourage AMU departments and colleges in STEM area to facilitate and implement the project items in the proposal.
- d) Enable research supervisors (faculty), staff and selected students to participate in an Exchange Program with OSU for the duration of the program. Whereas AMU is unable to make monetary commitment, AMU is deeply appreciative of the prospective support from USIEF for the full cost of travel and other expenses to implement the program.
- e) AMU will endeavor to select the brightest students to participate in this intensive program.  
The selection of students would be made on the basis of competitive tests and/or interviews conducted by AMU and with equal opportunity for all students enrolled in STEM graduate programs at AMU. AMU would modify its ordinances and frame regulations to select students for the STEM-ER program.
- f) AMU will provide local hospitality (accommodation, office space and resources, etc.) at the university guest house for visiting instructors and researchers from OSU.

AMU will fulfill its obligations and lead the nation on behalf of Indian universities to pursue similar programs.

### **ESTABLISHMENT OF THE OSU-AMU CENTER OF EXCELLENCE IN STEM EDUCATION AND RESEARCH (ER)**

The two partners agree to establish the new **OSU-AMU Center of Excellence for STEM** faculty training on the campus of Aligarh Muslim University (AMU). The center will have:

1. Digitally equipped classroom(s) with internet connectivity and computers. These would be utilized for instruction to AMU students in STEM subjects. Classes would be conducted by OSU-AMU instructors, and by the selected Center Fellows in training as new faculty under the STEM-ER Project. Ideally, each classroom would be equipped with a large centrally located and computer connected projection high-definition TV screen. Internet connection could enable lectures to be webcast in real time to distant locations to students at other colleges and schools as desired. Pre-recorded on-line lectures from OSU as well as other major universities would also be utilized for instruction.
2. Office space with internet facilities for 2-3 visiting personnel from OSU (each visit is envisaged to be for a few weeks).
3. Administrative staff support for the Center and stationery with OSU-AMU logos. Any use of OSU logos or marks requires approval of the OSU Trademark and Licensing Office.
4. Guest house accommodation and hospitality for the visitors.
5. Support for AMU faculty and staff participating in Center activities, including teaching, research, administrative affairs and liaison with OSU counterparts.

### **MASTER DUAL-DEGREES IN STEM EDUCATION**

OSU and AMU agree to develop Masters Dual Degree program in STEM education.

1. In order to facilitate e-learning instruction and examination for the two-year dual-degree Masters in Education with STEM specialization (MEd-STEM) beginning in the summer semester of 2014 (SU14), AMU would enable digitally equipped classroom(s) and video-conferencing facilities.
2. The final examination for the OSU MEd-STEM degree in SU16 would be conducted via these facilities in Aligarh in the physical presences of an OSU examiner and AMU counterparts.

3. OSU and AMU will extend mutual e-learning facilities for instruction in courses through the proposed STEM-ER Center using software such as the "Software as a Service" (SaaS) web portal facility.

Specifics of the MA Dual Degree STEM education program will be agreed upon in a separate written agreement between OSU and AMU.

### **Liaison Offices**

Each party shall designate a person or office to serve as a liaison responsible for implementation of this agreement:

#### **The Ohio State University**

##### **U.S. Project Director**

Professor Anil Pradhan,  
Department of Astronomy

##### **Chief Liaison Officer**

Professor Sultana Nahar,  
Department of Astronomy

##### **Chief Administrative Officer**

Christopher Carey  
Director of Global Gateways  
The Ohio State University  
203 Bricker Hall  
190 North Oval Mall  
Columbus, OH 43210  
614-292-2990

#### **Aligarh Muslim University**

##### **India Project Director**

Professor Wasi Haider, Department of  
Physics/Prof. S. Alim Husain Naqvi,  
Department of Applied Physics

##### **Chief Liaison Officer**

Professor Nesar Ahmad,  
Department of Computer Engineering

##### **Chief Administrative Officer**

Shahrukh Shamshad  
Group Captain (Retd)  
Registrar,  
Registrar's Office, AMU,  
Aligarh 202002, India

### **Export Control**

It is recognized and understood that this Agreement is subject to all applicable US export control laws and regulations controlling the transfer of technical information or items out of the US. The transfer of certain technical information or items may require a license from the US Government. All parties must comply with all applicable export control laws and regulations and no party may export or allow the export or re-export of any information or item when to do so would constitute a violation of those laws or regulations.

### **Intellectual Property Law**

Each party reserves the right to publish the results of this collaboration. Before submission for publication, however, each party shall notify the other of its intention to publish, and shall submit the manuscript to the other party for review and comment. The reviewing party shall have thirty (30) days from receipt of the manuscript to present any written comments to the other party. The reviewing party's comments shall be given due consideration by the other party. The publication of the results may be delayed at the reviewing party's written request for a period not to exceed ninety (90) days if it contains a disclosure of an invention(s) on which

either party desires to file a United States or foreign patent. It is understood that in no case can this provision for delay of publication cause a delay in the normal academic progress of a graduate student of either party with respect to preparation and submission of a graduate thesis or dissertation. Any ownership of inventions will be determined pursuant to US or Indian patent laws.

### Effective Date and Length of Agreement

This agreement will be in force for a period of five (5) years from the latest date appearing below. It may be renewed for additional periods of five years if both institutions, acting independently, agree in writing to renew it at least six (6) months before it expires.

Each party shall be responsible for assuring full compliance by its participants with applicable laws and regulations of the respective Nations. Nothing contained herein or in the activities conducted hereunder shall constitute either party the agent, servant or employee of the other party, and each party shall be fully and solely responsible for its own actions and obligations.

This agreement shall take effect on the date indicated below. In witness hereof, the parties here to have offered their signature:

#### The Ohio State University



Dr. William I. Brustein  
Vice Provost for Global Strategies and  
International Affairs  
The Ohio State University

Date

#### Aligarh Muslim University



Brig. S Ahmad Ali  
Pro Vice Chancellor  
AMU, Aligarh  
**Pro Vice-Chancellor**  
A.M.U., Aligarh U.P.

11 Nov 13

Date



Geoffrey S. Chatas  
Senior Vice President for Business  
and Finance and CFO  
The Ohio State University

Date



Shahrukh Shamshad  
Group Captain (Retd)  
Registrar  
AMU, Aligarh

**Registrar**  
**Aligarh Muslim University**  
**Aligarh (U.P.) INDIA**

Date