

Gujarat Technological University

International Experience Program

at

Kansas State University, USA



Gujarat Technological University

KANSAS STATE
UNIVERSITY

Division of
Continuing Education

Academic -Technical Report IEP 2013 at Kansas State University **Manhattan, Kansas**

(17 June, 2013 – 12, August 2013)

This year IEP 2013 at KSU for GTU students started on June 17, 2013 and ended on August 12, 2013. The students from electronics and communication engineering as well as mechanical engineering participated in the program. The courses were taught by experts in the respective area as follows.

1. Wireless Communication: Dr. Bala Natarajan
2. Digital Signal Processing: Dr. Sanjoy Das
3. Thermal Engineering: DR. Kevin Wenklyn
4. Refrigeration and Air Conditioning: Dr. Walid Chakouran

The Ph.D students, Maher Shehadi, Ola- Al-Ta'Ani and Chang liu, working as TA/RA were conducted laboratory and tutorial sessions for the courses.

The eight week long program gave excellent opportunity to learn courses of international standards for all the students who have participated in the program. **Academic calendar are strictly followed with continuous evaluation procedure and online system of interaction amongst faculty and students.** The scheme for the courses were declared on day one and maintained throughout the program. There were online quizzes, test, assignment and simulation exercise and test without time constraint as well. Exceptional punctuality has been observed in execution of each step of program in academic and co-curricular activity.

The content beyond the syllabus has been also covered and technical visit was arranged for the mechanical engineering students to power plant. The ece students were given laboratory tour by head of the department. The mechanical group were assigned interesting **project to design air-**

conditioning system for their own houses. There were sequence of laboratory tests to evaluate students of electronics and communication. The students were provided with solutions of test soon after test for laboratory as well as end semester examination. Students worked very hard and adapted to new system of teaching learning in short time and in awkward weather and environment with large time difference.

The k-state online system were made available to all students for accessing course material, upload assignments, attend online quiz, see home work and submit homework. Students got tuned to it and enjoyed. **Expert lectures by Anura Jayasumana from Colorado State University** was arranged for ECE students on “Topology Coordinate Systems: A Novel Domain for Self-Organizing” on July 23, 2013. The practical exams and presentations were conducted during the week of August 5- August 9, 2013. The final exams were conducted on August 9 and 12, respectively for the course taught during the program. The result shall also be made available well before August 17, 2013.

Academic Meetings and Presentations:

The ECE department tour was given by Dr. Bala on **June 20, 2013**. The ECE,KSU has excellent Microwave Circuits Laboratory, Communication Circuits Laboratory and Bio-Medical and Embedded Systems Laboratory. **The research and academic discussion was held on various issues on wireless communication and cyber physical system with exchange of material on these topics on June 26, 2013.** The representative laboratory material from GTU colleges on the IEP courses as well as PG course was also shared with ECE, KSU and was appreciated by the faculty.

Presentation about the GTU and various program was given to group of ECE Department on **June 27, 2013** by Dr.Vishvjit Thakar. The presentation also included representative IDP/UDP and Masters’ thesis. During the meeting Dr. Don Greunbador, Dr. William Kuhn, Dr. Dwight Day and Dr. Bala Natarajan remained present. The possibility of 1+1 Masters’ program was discussed with Head ECE and Dr. Bala. The support from ECE faculty is essential for success of 1+1 Masters’ program.

The technical presentation on “Control Issues in Communication Network” was given by Dr. Vishvjit Thakar to Wicom group members at ECE department of KSU on **July 5, 2013**. The faculty exchange possibility as well as Masters’ student project possibility has also been discussed with ECE group.

The meeting with Dr. Hosni, Dr. Bala was held on July 12, 2013 and July 22 for 1+1 Graduate program and how to make it happen. **Dr. Akshai Aggarwal provided inputs** about what GTU wants to Dr.Hosni and Dr. Bala **via electronic meeting**. The points raised by Dr. Aggarwal were put up to the Dean Graduate School and has been considered for implementation. There were several brain storming sessions for discussion on 1+1 mode details were also held.

Gujarat Technological University

The visit to computing and information science at Nichol's hall was made and short discussion about adding IEP courses next year and PG program on **July 23, 2013**. They have an excellent course on Real Time Embedded Systems to be offered during summer for under graduate students.

The meeting of Dr. Sue Maes, Dr. Don, Head ECE, KSU, Dr. Bala Natarajan, Dr. Vishvjit Thakar, Dr. Caterina Scolgio with Dr. Carol Shanklin, Dean Graduate School was arranged to discuss modality of Masters' program with GTU on **July 23, 2013**. The meeting remain very useful with what to do for MOU on 1+1 program as a next step. The Dean Graduate school has

recommended to go ahead with ECE department for 1+1 program. Dr. Bala and Dr. Vishvjit Thakar has prepared a joint proposal for 1+1 program and its possibility of its execution with help of ECE faculty at KSU. The proposal has been discussed with Dr. Hosni for further making it happen within next few months.

On July 26, 2013 the video presentation was made by Hon'ble Vice Chancellor to GTU students at IEP, KSU at 8:30 a.m. The students expresses their deep gratitude for providing them with an excellent opportunity of international experience which otherwise would have remained as a dream only for many.

On July 29, 2013 Dr. Bala interacted with group of GTU PG students and faculties of one of the affiliated institute in the morning at 7:30 a.m. He gave outline of recent trends in wireless communication and scope of research at KSU for Masters' as well as doctoral students. He provided with clear ideas about research topics and how to make it happen for about 90 minutes. It was executed using Zoom video conferencing facility.

On July 31, 2013 visit to computing and information systems was made and meeting was held with Head and Graduate Program Coordinator for Joint Masters' program. They have flexible scheme and much independent on offering the course. Short tour to high performance computing laboratory and cyber security laboratory was given by head of the department. Further discussion to make the program is ongoing as per advice of Hon'ble Vice Chancellor.

Development and Exchange of Learning Material:

For the course on Digital Signal Processing a learning material has been developed for the University. The material shall be made available to the faculty and students interested to have the same. The course material and wireless communication has been shared with the University and shall be made available to interested faculty and students.

Consent as New Ph.D Co-Supervisor from KSU:

Dr. Sanjoy Das : Machine Learning, Multiagent System and Quantum Computing

Dr. Anil Pahwa: Power System and Smart Grid

Dr.Das has offered to conduct short course on Machine Learning and Multi Agent System during winter or summer or spring break at GTU.

Quotes from Faculty for IEP 2013 : Summer Program

"I am very content teaching the Refrigeration and Airconditioning course, GTU students are eager to learn and they come to class always prepared"

- Dr. Walid Chakroun, Mechanical and Nuclear Engineering, KSU, USA

"Having the opportunity to work with GTU students is one that I truly enjoy. They challenge me with their desire to learn more about the subjects I present to them in class. In turn, I try to challenge them so that they can gain true understanding "

- Dr. Kevin Wanklyn, Mechanical and Nuclear Engineering, KSU, USA

"I enjoy interacting with GTU students who are excited and eager to learn. A unique program that offers both educational and cultural experiences for students - hope that more students will benefit from it in the years to come."

- Dr. Bala Natarajan, Professor, Department of Electrical and Computer Engineering, KSU, USA

"I believe programs like this with GTU are of great benefit for both our faculty and students at both institutions. The experiences, learning, and collaboration will certainly benefit everyone involved."

- Dr. Don Gruenbacher, Head, Department of Electrical and Computer Engineering, KSU,USA

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Mech Engg Students after visit



Mech Engg students at the visit



Head ECE During the Department Tour



Student outside the exam hall

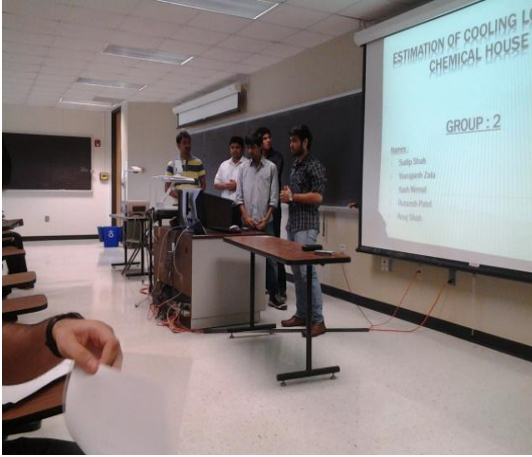


Students with TA



Students with Dr.Das

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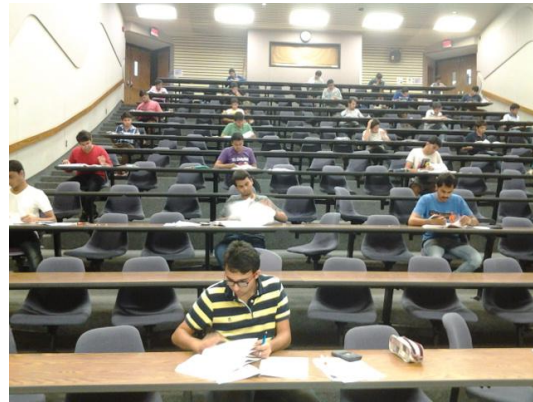
Students giving presentation



Student attending presentation



ECE Students at DSP examination



Mechanical Student appearing for RAC exam

Acknowledgement:

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