

TO: Dean of Engineering Armen Der Kiureghian  
FROM: Noone Gandjuman, Secretary for the College of Engineering  
Date: December 16, 1992

AMERICAN UNIVERSITY OF ARMENIA  
COLLEGE OF ENGINEERING  
ENGINEERING RESEARCH CENTER

**END OF QUARTER REPORT**

Fall Quarter, September 21 - December 1992

Fall 1992 Quarter of AUA is approaching its end. Instructions and final examinations are over, Industrial Engineering students are completing and finalizing their projects and Earthquake Engineering Students are busy with their researches at ERC.

Preparing this report I used the preliminary outlines and syllabuses given to me by faculty, all the records from my files. I also met students of both Departments to find out about their work. They made many comments on the teaching process of Fall Quarter, that I found worth including in the report. I gave particular importance to those of Industrial Engineering students, taking into account the unfortunate problems and misunderstandings caused by late arrival of Dr. Gleason's box and Dr. Trivedi's early departure.

This report will attempt to give a picture of teaching and research activities in the College of Engineering and ERC during Fall 1992 Quarter.

CC: Provost Dr. Gibson

## EARTHQUAKE ENGINEERING DEPARTMENT

**Instructor: Roy Stephen**

**Course: EE240 Concrete Technology and Structural Materials**

This course took place from 9:10 to 10 AM, 4 times a week, Monday through Thursday, with a total of 40 sessions. There was room #35 assigned for this class, but starting November the classes moved to #65, which was warmer. The course included lectures, several laboratory sections, that took place at the Huntsman precast concrete factory in Yerevan, and two field trips: first one to Hrazdan cement factory and the second - to various concrete structures around Yerevan. Roy Stephen broadly used audio-visual equipment in his instructions, i.e. video monitor and slide projector. Consultations took place usually in the afternoons Monday-Thursday and sometimes on Friday mornings, set each time by a preliminary appointment between the instructor and the students. The final examination was administered on December 1. It consisted of two parts: part of it was open books open notes and part - closed books closed notes. (The students' grades were sent to you by me last week).

**Instructor: Dr. Vagharshak Vardanyan**

**Course: EE221 Dynamic Analysis of Structures**

This course met 4 times weekly Monday through Thursday 10:10 - 11 AM, with a total of 40 sessions. It was conducted in room #35 until November when it moved to #65, which was easier to heat. Regular consultation hours were 2-3 PM Monday-Thursday. The final exam was administered on November 30, was open books open notes.

**Course: EE230 Structural Mechanics**

This course met 4 times weekly Monday through Thursday 11:10 AM - noon, with a total of 40 sessions. It was conducted in room #35 until November when it moved to #65, which was easier to heat. Regular consultation hours were 3-4 PM daily. The final exam was administered on December 2, was open books open notes.

There was one outdoor session in the Seismic Protection Institute, where students were taken by Dr. Vardanian to attend a seminar.

## Industrial Engineering Department

### **Instructor: Dr. John Gleason**

The both courses unfortunately were effected by the late arrival of Professor Gleason's teaching materials. The box containing them got to Yerevan on October 18 and only after that Dr. Gleason started using videos and all the written materials he had prepared for his courses.

Consultation hours for the both of his courses were 11:30 - 12:30 Monday through Thursday.

#### **Course: IE231 Operations Research**

This course met 4 times weekly Monday through Thursday 9:00 - 10:10 AM, with a total of 30 sessions. The room assigned for it was #37.

The midterm exam consisted of two parts, was administered on October 14 and 15; the final exam was administered on November 9, all of them were open books open notes.

#### **Course: IE 290 Environmental Risk Management**

##### **Teaching Assistant: Vartan Tserounian**

This course met 4 times weekly Monday through Thursday 10:20 - 11:30 AM, with a total of 30 sessions. The room assigned for it was #37. Final exam - November 10, open books open notes.

There are term projects assigned for this course. Their topics were decided and student teams were formed in the mid-October. The projects are three. The students have been working on them since November and they have to submit the papers on December 18.

Vartan Tserounian is helping students with their term projects. During the class hours he presented three lectures on general Environmental problems and on Environmental Issues of Armenia.

##### **Comments:**

There is an opinion among students that the presentation of this course lacked integrity and its inner logic. No written syllabus or rationale, describing the content, scope and goal of the course, had been given to the students before the commencement of the course. There were also complains that the materials, given by Professor Gleason to students for their projects, were not adequate to the assignment.

### **Instructor: Professor Abhay Trivedi**

#### **Course: IE275 Computer-Aided Manufacturing**



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Met 4 times a week Monday through Thursday 1 - 1:50 PM. Classes took place in room # 37 and in the Computer lab. Instructor's office hours were 9 AM - noon, but besides that time he was available for consultations by appointment at any convenient for students time, even late in the evening, until 9 - 10 PM. There were 2 midterm exams and one final, closed books closed notes.

#### **Course: IE260 Facilities Planning and Design**

Met 4 times a week Monday through Thursday 2 - 2:50 PM. Classes took place in room # 37 and in the Computer lab. Instructor's office hours were 9 AM - noon, but besides this time he was available for consultations by appointment at any convenient for students time, even late in the evening, until 9 - 10 PM. The course had a midterm and a final exams (open books, open notes), and a term project. The assignment for the projects have been made before Abhay Trivedi AUA left for India. Students admit that the assignment all the details for their work was stated by the professor very clearly, so they didn't have problems working on the papers even though Dr. Trivedi was away. All five of the projects have been completed and submitted to my office before the deadline.

#### **Field Trips:**

There have been four field trips arranged to Milling Factory, Programmable Controllers Factory (PAL), Car Factory (ERA), Critical Care Unit (CC) of Republican Hospital. Visits to Milling and P factories were designed to help the both courses, while ERA and CC were mainly important for Facilities Planning and Design class.

The dates and times for these field trips were agreed in advance with the factory administrations and we each time had someone of managerial staff guiding the students around the plant.

#### **Comments:**

Students note that Professor Trivedi is the one who requires and appreciated a creative work during exams, that he encouraged independent thinking and independent approach towards problems in his classes, what made students feel very free expressing their ideas during the sessions. At the same time he was demanding of their work and strict in grading. His home assignments touched the key problems of the courses and, what was very remarkable, were followed by extremely detailed discussions and explanations. Several students are looking forward to working under his guidance on their Master theses.

### **ENGINEERING RESEARCH CENTER**

Dr. Vardanyan was directing the Center during the summer quarter. He met the leaders of the projects and discussed the process of their researches. He also scheduled series of seminars in November. There is a plan for them attached to this report and I have put marks on those seminars that actually took place.

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The employees keep in touch with you by e-mail and fax - AUA provides them communication facilities when required.

ERC has started an Environmental Science and Management Program leaded by Vartan Tserounian. This program is fast growing at the moment and Vartan submits his reports to you and to Dr. Agbabian regularly.

Petros Keshishian, who is a coordinator of the Center activities, promised to send you a separate report on ERC shortly.

### Seminars

We arranged three public Engineering Seminars:

9/29/1992	"Use of simulation in solving a variety of Manufacturing problems" by Dr. Trivedi
10/13/1992	"Lessons learned from the failure of mid-rise reinforced concrete buildings on the Armenia earthquake" by Dr. Vardanyan
11/17/1992	"The role of experimental research on structural design" by Roy Stephen

They were attended by the students of AUA and specialists from Polytechnic University, other Engineering Research and Design Institutes. Each time we had an auditorium of 50-70 people. There was simultaneous translation provided. The lectures were usually followed by questions and discussion. There were refreshments served after the seminars. The copies of announcements and the student seminar attendance list have been sent to you.

### Expenditures

We received two advanced payments from the Accountant, 5 thousand rouble each time ( on August 12 and on October 15). This money was mainly spent for organizing three Engineering Seminars, a sightseeing tour and purchasing 4 Art books of Saryan for presents to the faculty, coffee, tea and sugar. The following memorandums are copies of those addressed to the accountant, concerning our expenditures.

TO: Mnatsakan Mkrtchian  
FROM: Noone Gandjuman  
DATE: October 15, 1992

The sum of 5 thousand rouble received from you as an advanced payment was spent for the following items and services needed by the College of Engineering:

1. Sightseeing tour	155 rouble
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2. Tea	(1pc)	150	"
3. Taxi		50	"
4. Interpreter	(2,5 hours)	500	"
5. Pastries for seminars		2800	"
6. Sugar	(2 kg)	200	"
7. Coffee instant	(4 pc)	800	"

Total 4655 Rouble

5000

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4655

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345

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49

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Total remaining balance 394 Rouble

We request you to release another advanced payment of 5 thousand rouble for needs of the College of Engineering. Thank you.

TO: Mnatsakan Mkrtchian  
FROM: Noone Gandjumian  
DATE: December 15, 1992  
RE: Expenditures of College of Engineering

The sum of 5394 (394 is a balance from previous payment) received from you as an advanced payment was spent for the following items and services needed by the College of Engineering:

1. Refreshments for the seminars	2575	rouble
2. Interpreter (2 hours)	400	"
3. Books (3 books of Saryan)	1200	"
4. Coffee instant (3 pc)	1200	"
5. Sugar (2 kg)	340	"
Total	5715	Rouble

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5394

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Total remaining balance 321 Rouble

I would appreciate your paying me back the sum of 321 Rouble. Thank you.

cc: Armen Der Kiureghian

PLACE: ROOM # 65

American University of Armenia  
Engineering Research Center

ERC Seminar Plan (November)

Topic	Reporter	Date/Time	
① Comparison of UBC ('82 & '88), SN&P, and new Armenian Codes.	Vagarshak Vardanyan Armen Martirosian	November 2, 1992 at 3 p.m	✓
② Features of ETABS computer program	Vagarshak Vardanyan	November 5, 1992 at 3 p.m	✓
③ Method of building rehabilitation with flexible upper floor.	Edward Khachian Petros Keshishian	November 9, 1992 at 3 p.m	✓
4. Seismic rehabilitation of buildings by column reinforcement.	Michael Melkumian Arkady Aronchik Armen Martirosian	November 12, 1992 at 3 p.m	
⑤ Enhancement of ETABS input charts and output files	Gabrielian Edward	November 16, 1992 at 3 p.m	✓
⑥ Expanding concrete pile model	Rouben Harutunian Melik Melkumian Ruzan Aghazadian	November 19, 1992 at 3 p.m	✓
7. Enhancement of STOCAL program	Ashot Hagopian Levon Aslanian Petros Keshishian	November 23, 1992 at 3 p.m	
8. Analytical methods for MCMEMS	Karen Ghazarian Maya Belubekian Lucine Gevorgian	November 26, 1992 at 3 p.m	
9. Software for digitization of seismic records.	Levon Aslanian	November 30, 1992 at 3 p.m	