#### University of Jaffna

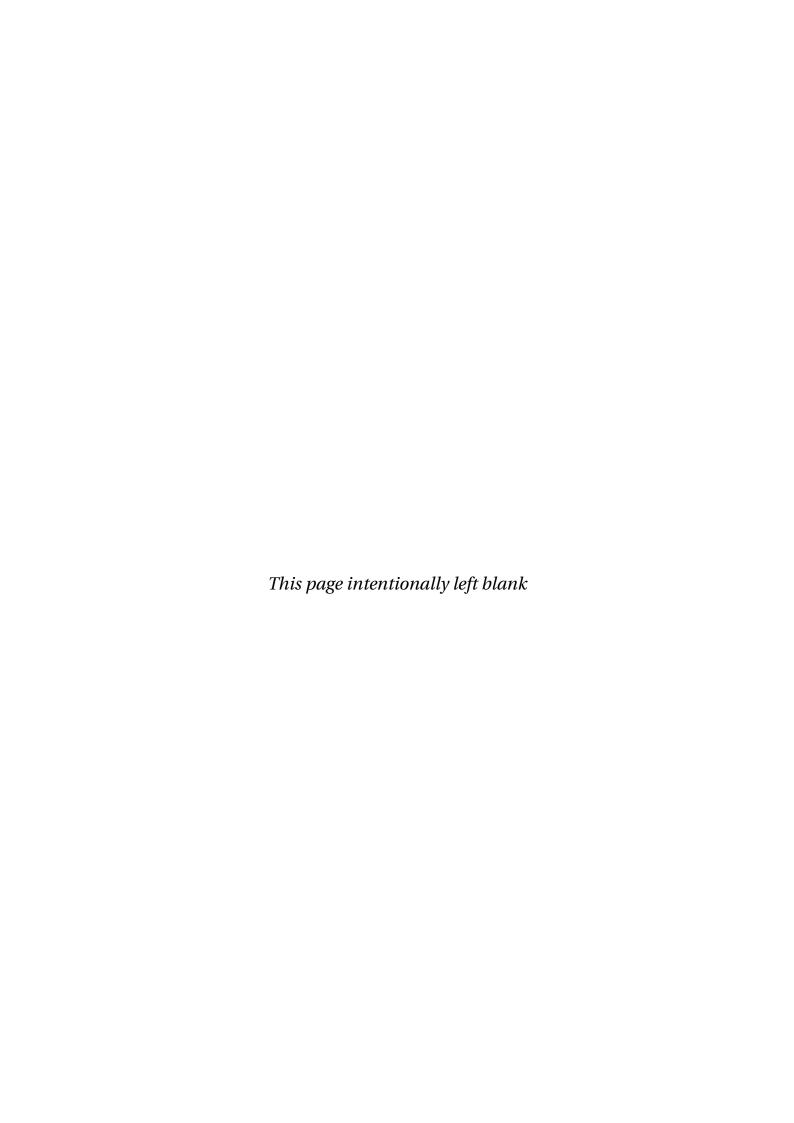


# Recognition of Bachelor of the Science of Engineering Degree Faculty of Engineering

# A SHORT REPORT ON THE EVALUATION VISIT OF INSTITUTION OF ENGINEERS SRI LANKA (IESL)

Eng. K.M. Vignarajah Accreditation Manager / Senior Lecturer Grade I, Department of Civil Engineering, University of Jaffna.

> 9-10 January 2018 SRI LANKA.



#### **Executive Summary**

The Faculty of Engineering, University of Jaffna has four departments of study namely, Civil Engineering, Computer Engineering, Electrical and Electronic Engineering and Inter-disciplinary Studies.

The Faculty of Engineering offers engineering degree program for four academic years leading to the degree in Bachelor of the Science of Engineering (BScEng).

To obtain the recognition from Institution of Engineers Sri Lanka (IESL) for the engineering degree offered, a self evaluation report (SER) was sent to IESL by the following departments of study:

- Civil Engineering
- Electrical and Electronic Engineering
- Inter-disciplinary Studies

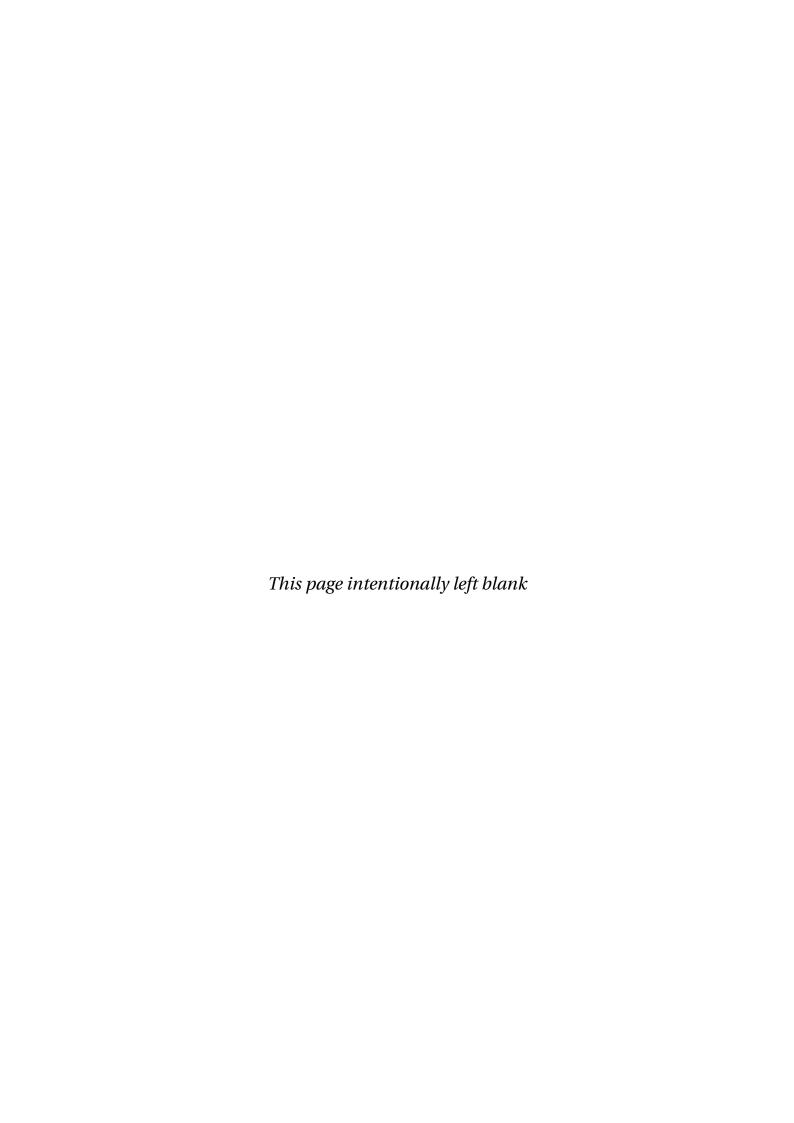
As a part of the IESL Recognition of BScEng degree offered by Faculty of Engineering, University of Jaffna, an evaluation panel of seven members were appointed by IESL. The names and designation of IESL Evaluation Team members is given in Table (1).

Table 1: IESL evaluation team

SN	Name	Designation
1	Prof. S.B.S. Abayakoon	Chairman
2	Dr. A.L.M. Mauroof	Member
3	Dr. L.B.K. Laksiri	Member
4	Eng. Madhava Perera	Member
5	Eng. P.D. Sarath Chandra	Member
6	Eng. Gamini Nanayakkara	Member
7	Dr. Kamalanath Samarakoon	Member

The IESL evaluation panel visited the Faculty of Engineering, University of Jaffna, on the  $9^{th}$  January 2018. The purpose of the visit is to physically see and access the course materials, laboratory facilities and interact with students, staff and other workforce. The evaluation process continued up to  $10^{th}$  of January 2018.

The evaluation panel shall prepare a report of their findings on the programme of study and present to the IESL within a period of eight (8) weeks.



# **Table of Contents**

EX	cecut	nve Summary	1
Li	st of ]	Figures	v
Li	st of	Tables	vi
1	Intr	roduction	1
	1.1	Vision	1
	1.2	Mission	1
	1.3	Establishment of Engineering Faculty	1
	1.4	Early Years of Discussions	2
	1.5	Goal and Objectives	2
	1.6	Desired Graduate Profile	3
2	IES	L Evaluation Team Activities – First Day	4
	2.1	Meeting with Vice Chancellor at Jaffna	4
	2.2	Presentations by Dean and Head of Departments	5
	2.3	General Discussion at Faculty of Engineering	6
		2.3.1 Separation of mechanical engineering department	6
		2.3.2 Discussion on common programme	6
		2.3.3 Discussion of self evaluation report	6
		2.3.4 Industrial training programme	7
		2.3.5 Course units, coordination and moderation	7
		2.3.6 Learning Outcomes	7
	2.4	Meeting with Non-academic Staff	8
	2.5	Visiting Engineering Library	8

	2.6	visiting Dep	artments	9
		2.6.1 Civil	Engineering	9
		2.6.2 Elect	rical and Electronic Engineering	2
		2.6.3 Mech	anical and Process Engineering	6
	2.7	Meeting wit	n Academic Staff	6
	2.8	Private Sess	on	7
3	IES	L Evaluation	Team Activities – Second Day	8
	3.1	Meeting wit	n Students	8
		3.1.1 Civil	and Environmental Engineering	8
		3.1.2 Elect	rical and Electronic Engineering	8
		3.1.3 Mech	anical and Process Engineering	9
	3.2	Private Sess	on - Access Displayed Materials	9
	3.3	Meeting wit	n Industrial Consultative Committee - ICC	9
		3.3.1 Civil	and Environmental Engineering	9
		3.3.2 Elect	rical and Electronic Engineering	9
		3.3.3 Mech	anical and Process Engineering	0
	3.4	Meeting wit	n Engineering Graduates	0
		3.4.1 Civil	and Environmental Engineering	0
		3.4.2 Elect	rical and Electronic Engineering	0
		3.4.3 Mech	anical and Process Engineering	1
	3.5	Private Sess	on - Access Displayed Materials	1
	3.6	Private Sess	on - Recapitulate the Work	1
	3.7	Closing Sess	ion	1

# List of Figures

1.1	Schematic diagram of desired graduate profile	3
2.1	IESL evaluation team meeting with Vice Chancellor	5
2.2	Presentations in the super luxury bus	5
2.3	IESL Evaluation Team visiting engineering library	9
2.4	Visiting heavy structure Lab	9
2.5	Visiting geotechnical lab	10
2.6	Visiting hydraulics and fluid lab	10
2.7	Visiting concrete lab	10
2.8	Visiting hydrology and water resources lab	11
2.9	Visiting analytical lab	11
2.10	Visiting environmental and microbiology lab	11
2.11	IESL Evaluation Team visiting survey lab and store	12
2.12	IESL Evaluation Team visiting engineering lab	12
2.13	IESL Evaluation Team visiting robotics and automation lab	13
2.14	Visiting computer simulation lab	13
2.15	IESL Evaluation Team visiting electric power lab	13
2.16	IESL Evaluation Team visiting electric machine lab	14
2.17	Visiting biomedical and signal processing lab	14
2.18	Visiting communication lab	14
2.19	IESL Evaluation Team visiting rf and microwave lab	15
2.20	Visiting elementary lab	15
2.21	Visiting electronic fabrication lab	15
2.22	Visiting electronic lab	16
2.23	IESL Evaluation Team meeting with academic staff	17
2 24	IESI Evaluation Team private session - accessing displayed materials	17

# **List of Tables**

1	IESL evaluation team	i
2.1	Panel member details at the meeting with Vice Chancellor	4
2.2	Norms for High, Medium and Low in mapping	8
2.3	IESL panel visiting Civil Engineering	9
2.4	IESL panel visiting Electrical and Electronic Engineering	12
2.5	IESL panel visiting Interdisciplinary Studies	16
3.1	Meeting with students - civil engineering	18
3.2	Meeting with students - electrical engineering	18
3.3	Meeting with students - mechanical engineering	19
3.4	Meeting with ICC - civil and envronmental engineering	19
3.5	Meeting with ICC - electrical and electronic engineering	19
3.6	Meeting with ICC - mechanical engineering	20
3.7	Meeting with graduates - civil engineering	20
3.8	Meeting with graduates - electrical and electronic engineering	20
3.9	Meeting with graduates - mechanical engineering	21

#### CHAPTER 1

#### Introduction

The University of Jaffna was founded in 1974 as the Jaffna Campus of the University of Sri Lanka. The Jaffna Campus was launched with two faculties, the Faculty of Science and the Faculty of Humanities. On the 1<sup>st</sup> of January 1979, the Jaffna Campus of the University of Sri Lanka became an independent autonomous national university with the implementation of the Universities Act No.16 of 1978 and was named as University of Jaffna, Sri Lanka. While fulfilling its commitment as a higher educational institution of the nation, University of Jaffna has been playing a major role in promoting educational values to international standard and promoting cultural values of the Northern region of Sri Lanka. The University of Jaffna is committed to the search for truth, as it has been emphasized in its motto.

#### 1.1 Vision

Vision of University of Jaffna is

To be a leading centre of excellence in teaching, learning, research and scholarship

#### 1.2 Mission

Mission of University of Jaffna is

To produce intellectually and professionally competent and capable graduates to meet the emerging needs of the national and international community, with special emphasis on the social, economic and cultural needs of Northern Sri Lanka.

The main administrative premise of the University of Jaffna is located in Thirunelveli, Jaffna. The academic entities of the university are in Jaffna, Kilinochchi and Vavuniya.

#### 1.3 Establishment of Engineering Faculty

The establishment of Faculty of Engineering had been a long standing request of the University of Jaffna and a long felt need and expectation of the people of the region. With the establishment of the Faculty of Engineering, aspirations of the university and the people of the region have been consummated. New Faculty of Engineering, like jewel in the crown, makes the University of Jaffna fully fledged.

#### 1.4 Early Years of Discussions

As early as in 1979, the Senate and the Council of University of Jaffna decided to establish the Faculty of Engineering in Kilinochchi. In 1988, the University Grants Commission (UGC) also accepted the request made by the University of Jaffna to establish the Faculty of Engineering in Kilinochchi. Although a number of steps were taken by the University for establishing the Faculty in Kilinochchi, it had been delayed due to an unfavorable situation that prevailed in the region.

In 2010, as the situation was improving in the region, the Senate and the Council of University of Jaffna, the UGC, the Ministry of Higher Education, the general public and professionals wanted to give top priority to the establishment of the Faculty of Engineering in Kilinochchi to fulfill the aspirations of the community. In this regard, the Senate of University of Jaffna at its 353<sup>rd</sup> meeting held on 29<sup>th</sup> October 2010 appointed a sub-committee to study and report to the Senate on the establishment of the Faculty of Engineering. The sub-committee, considering the reports of the previous sub-committees, present trends of the Engineering Education and the Government's commitment on restoration of normalcy and the development of the region, submitted its proposal.

The Senate of University of Jaffna approved the proposal at its 357<sup>th</sup> meeting on 29<sup>th</sup> March 2011. Then, at the meeting held on 3<sup>rd</sup> April 2011, Council of University of Jaffna decided to establish the Faculty of Engineering in Kilinochchi adjoining the Faculty of Agriculture, initially with the following departments:

- (a) Department of Civil Engineering,
- (b) Department of Computer Engineering,
- (c) Department of Electrical and Electronic Engineering, and
- (d) Department of Inter-disciplinary Studies.

#### 1.5 Goal and Objectives

The primary goal of the Faculty of Engineering is to acquire, develop, and impart state-of-the-art engineering education, while contributing to the regional, national and global development. The objectives of the Faculty of Engineering are

- to offer a degree program, which produces graduates who should be able to
  - (i) apply fundamentals of science, mathematics, and engineering to address contemporary and future needs of society;
  - (ii) design and develop sustainable solutions through identifying, formulating and analyzing engineering problems while taking social, environmental and economical constraints into consideration;
  - (iii) function effectively as an individual and as a team member in a multi-disciplinary environment:
  - (iv) commit to work with professional and ethical responsibility while promoting social harmony;
  - (v) communicate competently and amicably at every level;
  - (vi) demonstrate the ability to manage one's own work, teams and projects;
  - (vii) adapt state-of-the-art tools and technology;
  - (viii) adhere to independent lifelong learning to develop in-depth knowledge towards wisdom,

- to provide services in conjunction with knowledge sharing to fulfill engineering needs of the industry and community,
- to engage in cutting-edge research that enables value addition, and development of new technologies, products and services.

#### 1.6 Desired Graduate Profile

The desired profile of the graduate from the Faculty of Engineering depicted in the Figure (1.1) encompasses intellectuality, research ability, attitude and managerial skill. At the end of the degree program, the engineering graduate shall exhibit sustainable knowledge in fundamental sciences, mathematics and engineering principles, and contribute to sustainable development while taking social, environmental and economical constraints into consideration.

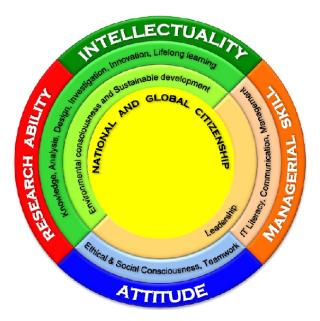


Figure 1.1: Schematic diagram of desired graduate profile

#### CHAPTER 2

#### **IESL Evaluation Team Activities – First Day**

On the  $9^{th}$  of January 2018, the IESL Evaluation Team started their activity at 7:30 A.M. from Ariviyal Nagar, Kilinochchi.

#### 2.1 Meeting with Vice Chancellor at Jaffna

The first agenda item was the meeting with the Vice Chancellor at the main campus. The Table (2.1) shows the panel members attended the meeting with the Vice Chancellor at 9:00 A.M at the main campus at Thirunelveli, Jaffna.

Table 2.1: Panel member details at the meeting with Vice Chancellor

SN	Name	Designation
01	Prof. R. Vigneswaran	Vice Chancellor
02	Prof. A. Atputharajah Dean/ Engineering	
03	Dr. N. Sathiparan	Act. Head/ Civil Engineering
04	Dr. T. Thiruvaran	Head/ Electrical and Electronic Engineering
05	Dr. A. Anburuvel	Head/ Inter-disciplinary Studies
06	Dr. A. Kaneshwaran	Head/ Computer Engineering
07	Dr. P. Kathirgamanathan	Convener/ IQAC
80	Eng.M. Vignarajah	Accreditation Manager
09	Prof. S.B.S. Abayakoon	Chairman/ IESL Evaluation Team
10	Dr. A.L.M. Mauroof	Member/ IESL Evaluation Team
11	Eng. Madhava Perera	Member/ IESL Evaluation Team
12	Eng. P.D. Sarath Chandra	Member/ IESL Evaluation Team
13	Eng. Gamini Nanayakkara	Member/ IESL Evaluation Team
14	Dr. Kamalanath Samarakoon	Member/ IESL Evaluation Team
15	Prof. S. Srisatkunarajah	Chairman/Curriculum Committee
16	Prof. P. Ravirajan	Chairman/University Research Committee
17	Dr. S. Kannathasan	Director/ Career Guidance Unit
18	Dr. P. Iyngaran	Senior Student Counselor
19	Mrs. T. Raveendran	Head/ Human Resources Department
20	Mrs. K. Sivaji	Head/ English Language Teaching Unit
21	Mr. M. Karunanithy	Head/ Marketing
22	Dr. S. Raguvaran	Head/ Media Studies
23	Prof. B. Nimalathasan	Head/ Accounting
24	Mr. K. Ganeshananthan	Director/ Physical Education

Initially, Vice Chancellor welcomed all the participants of the meeting. He thanked the Dean/ Engineering and his staff for their hard working on the process of bringing the Engineering Degree to the recognition stage.





Figure 2.1: IESL evaluation team meeting with Vice Chancellor

The Chairman of the IESL Evaluation Team, Prof. S.B.S. Abayakoon, briefly explained the purpose of their visit to faculty of engineering, University of Jaffna, for recognizing the Bachelor of the Science of Engineering (BScEng) degree programme. He also pointed out the early history of the recognition and/or accreditation of Engineering degrees in University of Peradeniya.

In the discussion time, mainly the following areas were taken:

- laboratory safety, health issues
- student counseling, student activities
- teaching methods in English
- students' skills in communication

The meeting concluded at 9.30 A.M. and the engineering team with IESL Evaluation Team returned to Ariviyal Nagar by 10.45 A.M.

#### 2.2 Presentations by Dean and Head of Departments

While traveling back to Ariviyal Nagar, Dean/ Engineering and Heads of the Departments presented overviews of the faculty of engineering and relevant departments in the super luxury bus.



Figure 2.2: Presentations in the super luxury bus

#### 2.3 General Discussion at Faculty of Engineering

The IESL Evaluation Team, Dean/ Engineering, Heads of Departments, IQAC, Career Guidance Adviser and UBL coordinator for the Faculty of Engineering met in the Dean's Board Room at 11:15 A.M. for the general discussion.

#### 2.3.1 Separation of mechanical engineering department

Initially, the IESL Evaluation Team requested the documents that states the separation of Department of Interdisciplinary Studies (IDS) into two departments such that:

- · Mechanical Engineering
- Mathematics and Complimentary Studies

In the preceding discussions, Dean/ Engineering explained the nature of the IDS and the degree offered by the IDS. One of the argument is insufficient staff who are specialized in mechanical engineering discipline.

#### 2.3.2 Discussion on common programme

The IESL Evaluation Team inquired about the common programme in the BScEng degree offered in the first three semesters. It was appreciated that the three semester common programme shall provide fundamental knowledge in engineering.

In the discussion, IESL Evaluation Team wanted to know about the appointment of external examiners and their components in designing the course unit, starting from delivery to examination. Dean/ Engineering stated that the course unit is delivered and assessed by in course assessments and end semester assessments. Dean/ Engineering also mentioned that the examinations are designed by a team consists of teaching panel, moderator and course coordinator.

One of the comments from IESL Evaluation Team is that the management studies in the curriculum is insufficient. Something like <u>Project Management</u> should be included in the special programme.

There are course units such as Financial Accounting is allocated with 3 Hours of lectures that are not enough. IESL Evaluation Team wanted to see possibilities to increase such lecture hours.

#### 2.3.3 Discussion of self evaluation report

In the self evaluation report (pp. 22), the phrase <u>mostly in English</u> leads to ambiguity in the medium of teaching. IESL Evaluation Team wanted to know that are there any other medium of teaching and assessment in the BScEng degree programme. Dean/ Engineering clarified that the phrase shall be changed to in English.

IESL Evaluation Team clarified that the correctness of information given in self evaluation report (pp. 30), that if a student get  $C^-$  or less then additional work will be given within two weeks of time. It was answered by ADPC Chairman that it is only for projects and in case of examinations the student needs to register for the relevant semester to sit for the examination.

#### 2.3.4 Industrial training programme

IESL Evaluation Team inquired about the involvement of the industry with the faculty of engineering. The concern raised by IESL Evaluation Team is that the industry may use the students to get their work done without going into the required depth of training. Also, it is advised that the industrial training should help students to bring new engineering problems to the study table. Dean/ Engineering explained that the industrial training is contracted by NAITA and relevant department staff from faculty of engineering visits work sites to assess the progress of students. The concept was welcomed by IESL Evaluation Team.

Also, every student undergoes industrial training should be assigned with the supervision of a Charted Engineer.

#### 2.3.5 Course units, coordination and moderation

The IESL Evaluation Team pointed out the followings:

- pass mark for in-course (≥ 35), end-course (≥ 35) and final marks (≥ 50 for C) should be clearly mentioned.
- end-semester assessment for taught courses should carry more weight
- take home exams should not carry more
- peer evaluation of the programme is necessary so that programme outcome (PO) of each course unit should be carefully addressed
- there are twelve (12) POs given in IESL Accreditation Manual. Do not copy those POs directly, but design your own POs for the programme.
- your POs shall include the verbs given in IESL Recognition Manual and/or Bloom's Taxonomy.

The IESL Evaluation Team stressed on the exact role of the moderator. Dean/ Engineering emphasized that moderators check the POs and time taken for each question in general and overall for the paper.

Considering the moderation for the course unit, IESL Evaluation Team specifically said that requirement of a moderator is something more than what Dean/ Engineering mentioned. Moderator's involvement should be very much different than subject coordinator who is responsible for kind of paper works. Moderator needs to know the subject well and try to balance the quality and the POs of the programme.

In his response Dean/ Engineering informed IESL Evaluation Team that exam results are checked in the faculty level before they are send to university level exam boards. Also, course coordinator, moderator and examiner are working as a team.

#### 2.3.6 Learning Outcomes

Each course unit should contain learning outcomes (LOs) those comply with the POs. The IESL Evaluation Team pointed out the followings:

- some course units have large number of LOs (10 to 12)
- normally, in outcome based education (OBE), it is important to measure qualitative response of the student
- number of LOs should not be too many

- when LOs are mapped against POs, then the page is full. it is very difficult to derive the qualitative measure (matrix)
- course unit should clearly identify its LOs and check with the mapping matrix to see whether the required level of quality is achieved.
- do not make the LOs complex. make it simple, elegant and clear with objectives

IESL Evaluation Team suggested the general norms for mapping POs and LOs such as given in Table (2.2).

Table 2.2: Norms for High, Medium and Low in mapping

Notation	Evaluation of LO
Н	evaluated by exams (quality)
M	may or may not be evaluated
L	normally not evaluated

IESL Evaluation Team suggested that maximum number of LOs shall be 4 to 5. Also, the curriculum for each course unit shall contain at least two or three text books as reference.

#### 2.4 Meeting with Non-academic Staff

After the lunch break, IESL Evaluation Team met all the non-academic staff including lab attendants, technical officers and some administrative staff in the seminar room. The meeting lasted over an hour

In the meeting, IESL Evaluation Team explored the level and depth of knowledge of the technical and lab staff on the followings

- number of practicals scheduled in each lab
- the way of conducting the practicals
- the purpose of each practicals
- how to attend emergency situation

It is observed that the level of understanding and knowledge of practicals in technical officers and lab attendants are very poor.

The IESL Evaluation Team recommends to increase the cadres of technical officers and lab attendants so that they can concentrate on the relevant practicals.

Also, regular training for the technical officers and lab attendants are mandatory because they support both student practicals and research instrumentation.

#### 2.5 Visiting Engineering Library

The IESL Evaluation Team visited the Engineering Library and examined the collection of books, manuals, journals and design codes.





Figure 2.3: IESL Evaluation Team visiting engineering library

#### 2.6 Visiting Departments

The IESL Evaluation Team visited three departments in parallel to check the facilities and access the displayed materials. The Chairman of the IESL team and Accreditation Manager - Engineering visited all three departments in turn.

#### 2.6.1 Civil Engineering

The Department of Civil Engineering is visited by prominent academic and industrial experts.

Table 2.3: IESL panel visiting Civil Engineering

Name	Affiliation
Dr. A.L.M. Mauroof	Senior Lecturer, Civil Engineering, Peradeniya
Dr. L.B.K. Laksiri	Project Director (CEB), Charted Civil Engineer

#### Visiting Heavy Structure Lab



Figure 2.4: Visiting heavy structure Lab

#### Visiting Geotechnical Lab



Figure 2.5: Visiting geotechnical lab

#### Visiting Hydraulics and Fluid Lab



Figure 2.6: Visiting hydraulics and fluid lab

#### Visiting Concrete Lab



Figure 2.7: Visiting concrete lab

#### Visiting Hydrology and Water Resources Lab



Figure 2.8: Visiting hydrology and water resources lab

#### Visiting Analytical Lab



Figure 2.9: Visiting analytical lab

#### Visiting Environmental and Microbiology Lab



Figure 2.10: Visiting environmental and microbiology lab

#### Visiting Surveying Lab and Store





Figure 2.11: IESL Evaluation Team visiting survey lab and store

#### 2.6.2 Electrical and Electronic Engineering

The Department of Electrical and Electronic Engineering is visited by prominent academic and industrial experts.

Table 2.4: IESL panel visiting Electrical and Electronic Engineering

Name	Affiliation
Dr. Kamalanath Samarakoon	Senior Lecturer, Computer Engineering Department, Peradeniya
Eng. Gamini D. Nanayakkara	Lecturer, Institute of Technology, University of Moratuwa

#### Visiting Student Open Lab





Figure 2.12: IESL Evaluation Team visiting engineering lab

#### Visiting Robotics and Automation Lab





Figure 2.13: IESL Evaluation Team visiting robotics and automation lab

#### Visiting Computer Simulation Lab

#### Installed software are:

- PSCAD, MATLAB, MultiSim
- NE Lab View, BOSOn NetSim
- MPLab, Power World
- Radio Mobile, IOTISYSTEM
- Wireless Insite Software



Figure 2.14: Visiting computer simulation lab

#### Visiting Electric Power Lab





Figure 2.15: IESL Evaluation Team visiting electric power lab

#### Visiting Electric Machine Lab





Figure 2.16: IESL Evaluation Team visiting electric machine lab

#### Visiting Biomedical and Signal Processing Lab



Figure 2.17: Visiting biomedical and signal processing lab

#### Visiting Communication Lab



Figure 2.18: Visiting communication lab

#### Visiting RF and Microwave Lab





Figure 2.19: IESL Evaluation Team visiting rf and microwave lab

# Visiting Elementary Lab



Figure 2.20: Visiting elementary lab

#### Visiting Electronic Fabrication Lab



Figure 2.21: Visiting electronic fabrication lab



Figure 2.22: Visiting electronic lab

#### 2.6.3 Mechanical and Process Engineering

The Department of Interdisciplinary Studies is visited by prominent academic and industrial experts.

Table 2.5: IESL panel visiting Interdisciplinary Studies

Name	Affiliation
Eng. P.D. Sarath Chandra	Head/ Mechanical Engineering, IESLCE
Eng. Madhava Perera	Consultant, Charted Mechanical Engineer

#### 2.7 Meeting with Academic Staff

The IESL Evaluation Team was very happy about the energetic staff for conducting academic programme, specially they thanked Ms. R.Ramachandran who demonstrated practical sessions in the Mechanical and Process Engineering Lab along with Ms. H.Krishnarajah.

In the discussion, IESL Evaluation Team pointed out that the knowledge about the practicals and skill level for the non-academic staff is very poor. It is due to the lack of non-academic staff who are allocated for specified labs and practicals. It was advised to recruit at least five (5) non-academic staff who can look into the practicals separately.

It is also mentioned that some course units on Mechanical and Process engineering covers very vast area of study within short period of time. It was recommended to look into the deliverable solution for such course units.





Figure 2.23: IESL Evaluation Team meeting with academic staff

In the first three common semesters, the time allocated and subject material included are not sufficient. For example, in Engineering Mechanics it is designed as a mixture of fluid, structural and classical mechanics. It should be restructured to provide statics and dynamics with sufficient lectures.

The recommendation is to increase the Mechanics in common programme because it is essential for all engineering students. (*in some foreign universities <u>Statics</u> is covered under Engineering Mechanics – I, and Dynamics is covered under Engineering Mechanics – II*).

It was recommended to drop some courses in the general programme which could be considered a special course units (*example: communication*). Also, course units such as solid mechanics, construction management, project management etc., should be included.

An advise given by IESL Evaluation Team is to <u>study the existing curriculum in Sri Lankan Universities</u>, such as Moratuwa, Peradeniya and Ruhuna, along with the industry requirements, and then formulate a suitable curriculum for the engineering faculty at University of Jaffna.

#### 2.8 Private Session

The general programme of the BScEng degree has three semesters which are common for all the students in a batch. The IESL Evaluation Team wanted to review those displayed material as a whole, and it is arranged in the Mechanical and Process Engineering Building.





Figure 2.24: IESL Evaluation Team private session - accessing displayed materials

#### **CHAPTER 3**

# **IESL Evaluation Team Activities – Second Day**

The evaluation programme for the second day started on 10th January 2018 at 8:30 A.M.

#### 3.1 Meeting with Students

#### 3.1.1 Civil and Environmental Engineering

Table 3.1: Meeting with students - civil engineering

SN	Reg. No	Name	Year
01		A. Janarth	Final
02		D.G.S. Wanaguru	Final
03		B. Sanjika	Final
04		S. Kasthuri	Final
05		J. Sathiyapreyanga	Third
06		S. Sanjith	Third
07		S. Vasanthan	Third
80		S.M.T. Ruwanal	Third
09		W. Vinoth Prasanth	First
10		J. Krishieka	First

#### 3.1.2 Electrical and Electronic Engineering

Table 3.2: Meeting with students - electrical engineering

SN	Reg. No	Name	Year
01	2017/E/045	Ms. Rushmi Jeyakrishna	First
02	2017/E/108	Mr. Yogaputhran Shomesh Shehan	First
03	2016/E/012	Mr. P.Gowtham	Second
04	2016/E/064	Ms. Buddika Chinthani	Second
05	2014/E/008	Mr. Thilanka Udara	Third
06	2015/E/032	Mr. Isuru Rajakaruna	Third
07	2015/E/010	Ms. Lasintha Piyatissa	Third
08	2015/E/049	Mr. P. Dilakshan	Third
09	2014/E/011	Ms. Naveendra Mihishani Jayakody	Final
10	2014/E/032	Mr. Ratnakumar Rajan	Final
11	2014/E/028	Ms. Vinushika Panchalogaranjan	Final
12	2014/E/054	Mr. G.W.S.P.K.Gunathunga	Final

#### 3.1.3 Mechanical and Process Engineering

Table 3.3: Meeting with students - mechanical engineering

SN	Reg. No	Name	Year
01	2014/E/014	Mr. Pattiyage Athula Kumara Karunarathna	Final
02	2014/E/040	Mr. Sebamalai Sujithran	Final
03	2014/E/056	Mr. Johivel Donald Nilson	
04	2014/E/058	Mr. Durairaja Neorooshan	Final
05	2015/E/012	Mr. Widanalage Hirunaka Sajith Wickramarathna	Third
06	2015/E/016	Mr. Kanishka Praveen Lankendra Kumarage	Third
07	2015/E/050	Mr. V. Madhushan	Third
08	2016/e/051	Mr. S.M.I.K. Subasingha	Second
09	2016/e/036	Mr. Sakila Rajakaruna	Second
10	2017/E/057	Ms. Madhuranya Muralitharan	First
11	2017/E/062	Mr. Pramuka Sooriya Patabadeniya	First

#### 3.2 Private Session - Access Displayed Materials

The IESL Evaluation Team accessed special programme course materials in private. The session was not recorded.

#### 3.3 Meeting with Industrial Consultative Committee - ICC

#### 3.3.1 Civil and Environmental Engineering

Table 3.4: Meeting with ICC - civil and envronmental engineering

SN	Name	Designation
01	Eng. K. Muraleetharan	Building Department
02	Eng. N. Suthaharan	Irrigation Department
03	Eng. A. Pushparajah	Central Engineering Consultancy Bureau

#### 3.3.2 Electrical and Electronic Engineering

Table 3.5: Meeting with ICC - electrical and electronic engineering

SN	Name	Designation
01	Eng. N. Navaneethan	DGM, Northern Province SLT
02	Eng. D.P. Gunathileka	DGM, Northern Province CEB
03	Eng. S. Sarveswaran	Head of Quality and Operational Excellence, Network Rollout and Optimize, Region South East Asia, Oceania, Ericsson
04	Eng. T. Kohulan	Senior Manager, Network Planning, Bharti Airtel Lanka (Pvt) Ltd

#### 3.3.3 Mechanical and Process Engineering

Table 3.6: Meeting with ICC - mechanical engineering

SN	Name	Designation
01	Dr. A. Anburuvel	Head/ Interdisciplinary Studies
02	Prof.K. Chelvakumar	Professor, IIT Gandhi Nagar (skype)
03	Mr. Rushanth Chandrabose	Head/ Engineering Industrial Solutions Lanka (Pvt) Ltd (skype)
04	Eng. J. Gowrynathan	Engineer/ Hirdarmani Fashions (Pvt) Ltd (skype)
05	Eng. T. Thileepan	Automation Engineer, MASS Active
06	Eng. Alvapillai	Cargills Food Processing
07	Ms. H. Krishnarajah	Lecturer (Prob.)
08	Ms. R. Ramachandran	Lecturer (Prob.)
09	Mr. V. Mugilgeethan	Lecturer (Prob.)

#### 3.4 Meeting with Engineering Graduates

# 3.4.1 Civil and Environmental Engineering

Table 3.7: Meeting with graduates - civil engineering

SN	Reg. No	Name
01	2013/E/009	Mr. Don Ashan Madushka Jeerasinga
02	2013/E/020	Mr. Jeyachandramoorthz Luxsan
03	2013/E/041	Mr. Kulathasan Thanushan
04	2013/E/042	Ms. Tharshikka Vickneswaran
05	2013/E/043	Ms. Thruchchelvam Thinojah

#### 3.4.2 Electrical and Electronic Engineering

Table 3.8: Meeting with graduates - electrical and electronic engineering

SN	Reg. No	Name
01	2013/E/010	Ms. D.H.G.A.E. Jayasinghe
02	2013/E/023	Mr. M.N. Nasik
03	2013/E/034	Mr. S. Sangar
04	2013/E/051	Mr. M. Yuvaraj
05	2013/E/053	Mr. K.R.S. Lankapriya

#### 3.4.3 Mechanical and Process Engineering

Table 3.9: Meeting with graduates - mechanical engineering

SN	Reg. No	Name
01	2013/E/004	Mr. Bopitiya Gedara Dimuth Harshana Bopitiya
02	2013/E/024	Mr. Ratnakumar Neethan
03	2013/E/025	Mr. Suguneswaran Nidershan
04	2013/E/048	Ms. Wickrama Arachchige Dinusha Dasun Kumari
05	2013/E/050	Mr. N.G.W. Mudiyanselage Asiri Roshan Bandara Wijethilaka

#### 3.5 Private Session - Access Displayed Materials

The IESL Evaluation Team accessed special programme course materials in private. The session was not recorded.

#### 3.6 Private Session - Recapitulate the Work

The IESL Evaluation Team gathered in the Dean's Board Room for recapitulate. The session was not recorded.

#### 3.7 Closing Session

The IESL Evaluation Team has completed their evaluation and private discussions by 4:00 P.M. on the 10th of January 2018. A concluding session was arranged in seminar room at 4:00 P.M. with Dean/Engineering, academic staff, administrative staff.

In the meeting, Director Internal Quality Assurance Unit (IQAU), Prof. T. Mikunthan also participated.

The IESL Evaluation Team Chairman, Prof. S.B.S. Abayakoon chaired the meeting with his panel members.

Firstly, he thanked academic staff for their dedication, commitment and determination to offer engineering degree in Faculty of Engineering, University of Jaffna. He appreciated the level of dedication of the academic staff in engineering faculty, Ariviyal Nagar.

Prof. S.B.S. Abayakoon concerned on considerable the distance of engineering faculty from the main campus. Prof. T. Mikunthan added that the Vavuniya Campus is also very far from main University but in the future it may evolve as an independent university.

The Chairman, IESL Evaluation Team, summarized that the three semester common programme is an advantage. To fully utilize it, curriculum shall be restructured. In some cases material taught in the first three semesters can be considered as special (move them to special programme) and material in special programme can be brought into common semesters (essentials).

The Chairman, IESL Evaluation Team, thanked the support and hospitality that they had in the last two days and it was remarkable.

In the thanking address, Dean/ Engineering expressed his sincere thanks to the academic staff (young
bloods), IESL Evaluation Team, and administrative staff.
End of Report
Blid of Report