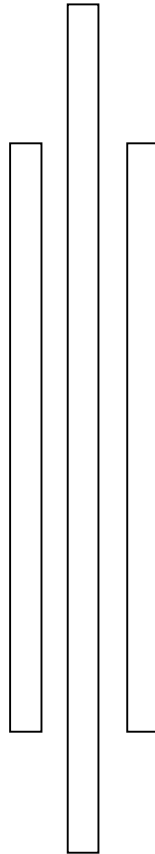


SELF STUDY REPORT



**Submitted to
University Grants
Commission
Bhaktapur, Nepal**

**Submitted by
School of Engineering
Kathmandu University**

18 February, 2020

18 February 2020

To,
The Chairperson
Higher Educational QAA Council
UGC, Sanathimi, Bhaktapur, Nepal

Subject: Submission of the Self Study Report (SSR)

Dear Sir/Madam,

We, hereby, inform you that the School of Engineering (SoE) of Kathmandu University has prepared this Self Study Report (SSR) report based on the available information, planning and implementation of eight criteria and benchmarks.

Please be informed that the information included in this SSR is an original work. The SSR has been brought to this form by through discussion, interaction and research, and no part of this document has been copied. This SSR has been prepared and submitted according to given format of UGC, QAAD.

Thanking for your kind co-operation and positive consideration.



Prof. Dr. Hari Prasad Neopane
Associate Dean, School of Engineering
Kathmandu University

18 February 2020

To,
University Grants Commission
Sanothimi, Bhaktapur

Subject: Declaration by the Head of the Institution

Dear Sir/Madam,

I, hereby, declare that the information included in this Self-Study Report (SSR) is an original work. This SSR has been brought to this form by thorough discussions, interaction and research, and no part of this document has been outsourced. We are ready to accept the feedback and correction by the Peer Review Team (PRT) during their visit.

Thanking for your kind co-operation and positive consideration.



Prof. Dr. Hari Prasad Neopane
Associate Dean, School of Engineering
Kathmandu University

ACKNOWLEDGEMENTS

The Self Study Report (SSR) of the School of Engineering (SoE) of Kathmandu University includes all the information from the time of its establishment till the present date. The School of Engineering of Kathmandu University is one of the schools of Kathmandu University among seven schools which is operated mainly in 4 locations inside the premises of central campus in Dhulikhel namely Block 08, Block 09, Block 10 and Block 11. The School of Engineering has been reinforcing the concept of interdisciplinary research between faculties to reach the world-class engineering level. The standards set have differed throughout the years, without causing the underlying concept of engineering to distort. Engineering has always been about advancements and improvements for humans. Therefore, the School has accumulated teachers as well as students who adhere to a rigorous curriculum ahead. We do not seek talented students, but the ones who are dedicated to becoming independent thinkers and problem solvers of the future. Simply, we want to create innovators whom the future awaits.

The School of Engineering has submitted Letter of Intent (LoI) to UGC on 27 August 2019 in order to participate in the process of QAA system. After obtaining the Letter of Intent (LoI), the School of Engineering has also formed a Self-Assessment Team (SAT) on 26 December 2019. The overall progress in each and every aspect of the school is initiated and led by the Internal Quality Assurance Committee (IQAC) in support with Dean, Associate Dean of SoE, Administrative staffs, Head of Departments, Faculties, students and cell functioning at the SoE.

The Self-Assessment Team (SAT) acknowledges and appreciates the help, cooperation, coordination, support and contribution and guidance provided by the Dean of the school, faculty members, staffs, program coordinators, students and many more. The information, contribution, support and suggestions received from them during this journey were invaluable. Without their support this report would otherwise, never have witnessed the form it appears at present.

EXECUTIVE SUMMARY

Kathmandu University (KU) is an autonomous, not-for-profit, non-government institution dedicated to maintain high standards of academic excellence. It is committed to develop leaders in professional areas through quality education. Within a period of 27 years of establishment, KU has not only built reasonable infrastructure, but also established a track record of academic excellence. The vision of Kathmandu University is to become a world-class university dedicated in bringing knowledge and technology to the service of mankind and its mission is to provide quality education for leadership. The University is running its program through 7 different schools including School of Engineering (SOE).

SOE is one of the prominent schools of Kathmandu University (KU). So, VMGO of SOE is in line with that of KU. SOE at Kathmandu University was established in 1994 with the aim to produce quality engineers in the country. During its establishment SOE has focused on those areas where other universities were not offering any such programs.

The University Grants Commission (UGC) has launched the Quality Assurance and Accreditation (QAA) programme, as an important aspect of reforming higher education in Nepal. Accordingly, a Quality Assurance and Accreditation Committee (QAAC) has been formed for the development and implementation of QAA activities in higher education in Nepal. The QAA Division in UGC has been established to facilitate QAAC and to perform activities related to QAA. With the objectives of improving quality of education and other services, the School of Engineering decided to include itself in the quality accreditation process of UGC and got the accreditation for first time on 2013 for five years. SOE has again submitted the Letter of Intent (LoI) to UGC on 27 August 2019 in order to participate in the process of re-accreditation.

SoE has realized the importance of QAA and the role it plays to improve the quality of education and services it offers and has been continuously monitoring its impact. Developing a quality culture in Nepalese context still appears as one of the challenges in administrative point of view. Nevertheless, several initiatives in form of informal academic audits are carried out to monitor the academic quality. For example, SoE strictly adheres and abides by the instructions and suggestions from Nepal Engineering Council.

After obtaining the Letter of Intent (LoI), the School of Engineering has formed a Self-Assessment Team (SAT) on 26 December 2019. The overall progress in each and every aspect of the school initiated and led by the Internal Quality Assurance Accreditation Cell (IQAAC) in support with the dean, the associate dean, administrative staffs, department heads, faculties, students and cell functioning at the SoE has been significant in the academic journey of the school.

The Self Study Report (SSR) was a great learning and also was a process of self-assessment for the school. During the process of preparation of SSR, school came to realize its strengths and weakness and became able to identify many areas for improvements. SSR preparation also helped school to analyze its current status and future prospects. SSR is the result of combined effort of various stakeholders. Various meetings and discussion have been held to facilitate SSR and inform stakeholders about QAA system. Interaction programs with faculty members, staffs, student representatives, and IQAAC have been conducted several times. Concerned stakeholders have been actively engaged in preparation of SSR by providing information or working for preparation of documents. Following strengths and areas of improvements have been identified by the school during its SSR preparation.

Strengths:

- Clearly defined vision, mission, goals, and objectives.
- Well-developed policy and procedures.
- Established brand name (recognized in national and international level).
- Degree recognized by many international universities (opportunity for credit transfer for students).
- Competitive courses offered meeting both national and international standard.
- Operates in planned way following the strategic plan and the annual plan.
- Different organizational structure in place to work in specified order and areas.
- Competitive graduates.
- Group of qualified professional as faculty members.
- Students from diverse background selected through systematic selection process.
- Curriculum designed as per international standards.
- Adequate infrastructure.
- Decision making through team work.
- Students actively involved in decision making process through representation in different committees.
- School activities guided by University Act.
- Transparency in management and operations.
- Graduates working in national and international level organizations.
- Different research project funds from external agencies (national and international).
- Focus on research work.
- Research scholars enrolled in PhD and MS by Research programs.
- Updated and well maintained information dispatch portal, e.g. well maintained website.
- Activities in accordance to vision, mission, goal and objective of school.
- Practical based teaching approach which gives a competitive edge to our graduates.
- Involvement of national and international expert for overall development of school.
- National and international exposure to faculty members for all round development.
- Student exchange programs to provide international exposure to students.
- Strong linkage with various national and international organizations for academic collaboration and excellence.

Areas for improvement

- Various forms and formats are developed to monitor aspects of quality education (for example, course evaluation form, performance appraisal, form etc.); however, strong implementation is still lacking.
- Separate public information cell to ensure communication to public should be effective.
- Scope for establishing placement cell and appointment of placement officer.
- Encourage students to be active in literary and artistic activities.
- Need to instill the culture of sharing of information.
- Develop plan for optimum utilization of existing infrastructure.
- Make existing database more user- friendly and available to its stakeholders anytime.

ABBREVIATION

AIKUYN	Amnesty International Nepal Kathmandu University Youth
AMES	Association of Mechanical Engineering Students
BE	Bachelor of Engineering
CEO	Chief Executive Officer
CEP	Community Education Program
CEPE	Center for Electric Power Engineering
CETRF	Center for Electricity Trade and Research Facilitation
CGPA	Cumulative Grade Point Average
COS-WASH	Certificate of Open Studies on Sanitation Water and Solid Waste for Development
CTEVT	Council for Technical Education and Vocational Training
DOCSE	Department of Computer Science and Engineering
DOEEE	Department of Electrical and Electronics Engineering
DOGEOM	Department of Geomatics Engineering
DOME	Department of Mechanical Engineering
EC	Executive Council
EIS	Education Information System
ENEP-RENP	Energize Nepal Project-Renewable Nepal
GCT	Green Club of Thoughts
GES	Geomatics Engineering Society
GPA	Grade Point Average
HEMTA	
HOD	Head of Department
ICT	Information and Communication Technology
IQAC	Internal Quality Accreditation Committee
IRD	Integrated Rural Development Project
ISMS	Information System Management Section
IT	Information Technology
JICA	Japan International Cooperation Agency
KAPEG	Kathmandu Alternative Power and Energy Group
KOICA	Korean International Cooperation Agency
KU	Kathmandu University
KUCAT	Kathmandu University Common Admission Test
KUCC	Kathmandu University Computer Club
KUCEC	KU Civil Engineering Club
KUONC	Kathmandu University Circle of Noble Chemineers
KUIC	Kathmandu University International Center
KUPEX	Kathmandu University Project Exhibition
KURC	Kathmandu University Robotics Club
KUSMC	KU Society of Music and Culture
KUYRCC	Kathmandu University Youth Red Cross Circle
LMTC	Land Management Training Center
ME	Master of Engineering
MEEPE	Master Program in Electrical Power Engineering
MOU	Memorandum of Understanding
MPPOES	Masters Program in Planning and Operation of Energy Systems
MS	Master of Science
NAST	Nepal Academy of Science and Technology

NEAEC	Nepal Electricity Authority Engineering Company
NEC	Nepal Engineering Council
NTNU	Norwegian University of Science and Technology
PBL	Project Based Learning
PCC	Policy and Coordination Committee
PEEDA	People Energy and Environment Development Association
RDC	Directorate of Research, Development and Consultancy
RTC-KU	Rotaract Club of Kathmandu University
SBIS	Society of Business Information Students
SEEE	Society for Electrical and Electronic Engineers
SOE	School of Engineering
SOL	School of Law
SOS	School of Science
SSR	Self Study Report
SWC	Student Welfare Council
TTC	Technical Training Center
TTL	Turbine Testing Lab
UG	Under Graduate
UGC	University Grants Commission
US	United States
UW	University of Washington
VMGO	Vision Mission Goal and Objective

Table of Contents

Section A	1
Section B	23
Criterion 1: Policy & Procedures	23
Criterion 2: Curricular Aspects	33
Criterion 3: Teaching Learning and Evaluation	41
Criterion 4: Research Consultancy and Extension	47
Criterion 5: Infrastructure and Learning Resources	56
Criterion 6: Student Support and Guidance	65
Criterion 7: Information System	69
Criterion 8: Public Information	72
Section I-Preamble	75
Section II-Criterion-wise-narrative	79
Section III-Summary	95

DATA COLLECTION FORMAT FOR SELF-STUDY REPORT (SSR)
INSTITUTIONAL

SECTION A

INFORMATION FOR INSTITUTIONAL PROFILE

1. Institutional Information

Name of the Institution: **KU School of Engineering (SOE)**

Place: **Dhulikhel Ward 4, Kavre**

P O Box: **GPO 6250, Kathmandu, Nepal**

District: **Kavre**

2. Information for Communication

a. Office

Name	Telephone with Extension Number	Fax	E-mail
Executive Head of the Institution: Dr. Damber Bahadur Nepali, Dean	011 415100 X 4202	011 415011	dean_engg@ku.edu.np
Executive Assistant: Dr. Hari Prasad Neopane, Associate Dean	011 415100 X 4208	011 415011	hari@ku.edu.np
Management Committee Chairperson: Prof. Dr. Ram Kantha Makaju Shrestha	011 415100 X 0210	011 415011	vc@ku.edu.np

b. Residence

Name	Telephone with Extension Number	Fax	E-mail
Executive Head of the Institution: Dr. Damber Bahadur Nepali, Dean	9801210003	NA	dean_engg@ku.edu.np
Executive Assistant: Dr. Hari Prasad Neopane, Associate Dean	9801670049	011 415011	hari@ku.edu.np
Management Committee Chairperson: Prof. Dr. Ram Kantha Makaju Shrestha	011 415100 X 0210	011 415011	vc@ku.edu.np

3. Type of Institution

Constituent ☒ Affiliated ☐ Degree Awarding Autonomous Institution ☐

4. Institutional Management:

Public ☒ Community ☐ Private ☐ Other (please specify) ☐

Autonomous Independent **Not for Profit**

5. Financial category of the institution:

Government Funded ☒ Self-financing ☒ Community ☐ Other (please specify) ☐
UGC

Major financing is done through tuition fee. In addition, KU also gets grants from Nepal Government through UGC. For several development and research projects, KU also receives funding from International agencies and donor organizations.

(See Annex S1-Q3-a, b, c, d, e)

6. a) Date of establishment of the Institution: **01/08/1994**
 b) Date of commencement of the Bachelor or higher level Program(s) **01/08/1994**

Levels	Name of Programs		Commencement Date
Bachelor Level	1	B.E(Electrical and Electronics) Specialization in Communication Specialization in Power and Control	August 1994
	2	B.E (Mechanical)	August 1994
	3	B.E (Computer)	August 1994
	4	B.E (Geomatics)	August 2007
	5	B.E(Civil Hydropower)	August 2009
	6	B.E (Chemical)	August 2015
	7	B.E (Architecture)	August 2017
Master Level	1	Master Program in Electrical Power Engineering (MEEPE)	August 2004
	2	M.E (Communication)	August 2001
	3	M.E(Computer)	August 2006
	4	MS by Research in DoCSE, DoEEE, DoME	August 2003
	5	M.Tech (IT)	August 2001
	6	M.E(Mechanical)	August 2001
	7	Masters Program in Planning and Operation of Energy Systems (MPPOES)	February 2011
	8	M.E (Land Administration)	August 2013
	9	M.E (Structural Engineering)	August 2015
	10	Master Program in Energy Efficient Building Design	August 2018
	11	ME/MS in Geoinformatics	August 2019
	12	ME/MS in Sanitation Tech	August 2019
Ph. D.	1	PhD (Mechanical Engineering)	January 2008
	2	PhD (Computer Engineering)	September 2009
	3	PhD (Civil Engineering)	September 2009

	4	PhD (Electrical and Electronics Engineering)	2011
	5	PhD (Geomatics Engineering)	August 2019

c) University to which the Institution is affiliated: (attach the certificate of affiliation)

N/A

7. Date of Government /UGC approval (only for Institution affiliated to foreign universities):

N/A

8. Is the institution autonomous in terms of

Financing ☒ * ☐ Administrative Management ☒ Academic Management ☒ None ☐

*Financing is partial autonomy with present financial rule

9. Institution's Land area in Ropanees/Bighas (Katthas)/Square Meters:

356 Ropanees; which also includes School of Science (SOS) and common facilities including the Central office.

(See Annex S1-Q9-a)

10. Location of the Institution

Urban ☒ Semi-urban ☐ Rural ☐

11. Current number of academic programs offered in the Institution under the following categories:

(Enclose the list of academic programs offered)

Academic Programs	Number of Program
Certificate course (PCL 2 years),10+2(HSEB), or CTEVT programs	N/A
Bachelors	7
Masters	11
MPhil	N/A
PhD	5 (Can Vary as per need)
MS by Research	6 (in all departments)
Total	29

List and commencement date of the programs are presented in Section A Question no. 6 above. The duration of the program and the fee structure vary according to the level and program. Duration of Bachelor of Engineering is for 4 years and costs NRs. 750000 where as Bachelor of Architecture program runs for 5 years and costs NRs. 855000. Masters level courses run for 2 years and cost NRs. 370000. However, the duration of PhD varies from 2 years or above and cost NRs. 525000.

(See Annex S1-Q11-a)

12. List the Departments in the Institution (faculty-wise)

Faculty of Science
Departments: N/A
Faculty of Humanities & Social Sciences
Departments: N/A
Faculty of Management

Departments: N/A
Faculty of Education
Departments: N/A
Faculty of Law
Departments: N/A
Institute of Engineering
Departments: N/A
Institute of Medicine
Departments: N/A
Institute of Agriculture
Departments: N/A
Institute of Forestry
Departments: N/A
Other Faculties: School of Engineering
Departments: Department of Computer Science and Engineering Department of Civil Engineering which also offers Bachelors in Architecture Program Department of Geomatics Engineering Department of Electrical and Electronics Engineering Department of Mechanical Engineering Department of Chemical Science and Engineering

13. Give details of the self-financing/self-initiated courses, if any offered by the institution (for public institutions only).

Levels	Name of Programs		Eligibility requirement for student admission	Student Number (Enrolment/Capacity)
Bachelor Level	1	B.E(Electrical and Electronics) Specialization in - Communication & -Power and Control (with 30 students intake in each)	-10+2 (or equivalent) examinations with minimum of 50% marks in aggregate and 50% in Physics, chemistry and Mathematics OR Minimum 2.4 GPA aggregate and minimum C+ in physics, chemistry and mathematics and minimum C in other subjects. -Candidates are required to appear in Entrance Exam, Kathmandu University Common Admission Test (KUCAT).	30+30=60
	2	B.E (Mechanical) with Specialization in -Automobiles -Hydro -Design and Manufacturing -Energy Technology (with 30 Students intake in each)		30+30+30+30=120
	3	B.E (Computer)		60
	4	B.E (Geomatics)		60
	5	B.E(Civil Hydropower)		60
	6	B.E (Chemical)		30

	7	B.E (Architecture)		30
Master Level	1	Master Program in Electrical Power Engineering (MEEPE)	-4 years Undergraduate/Bachelors' degree in engineering for an engineering degree and 4 years Undergraduate/Bachelors' degree in science with minimum 2.0 CGPA (on a maximum 4 point grading system) or 50% in aggregate marks are eligible to apply for a science degree. -Written Test -Interview	10
	2	M.E (Communication)		10
	3	M.E(Computer)		10
	4	MS by Research in DoCSE, DoEEE, DoME		May Vary
	5	M.Tech (IT)		10
	6	M.E(Mechanical)		10
	7	Masters Program in Planning and Operation of Energy Systems (MPPOES)		10
	8	M.E (Land Administration)		10
	9	M.E (Structural Engineering)		10
	10	Master Program in Energy Efficient Building Design		10
	11	ME/MS in Geoinformatics		10
	12	ME/MS in Sanitation Tech		10
Ph. D.	1	PhD (Mechanical Engineering)	-Completed Masters Degree in related field -Interview -Research Proposal Defense	May vary
	2	PhD (Computer Engineering)		
	3	PhD (Civil Engineering)		
	4	PhD (Electrical and Electronics Engineering)		
	5	PhD (Geomatics Engineering)		

14. State the norms and procedures for recruitment of teaching and non-teaching staff of the Institution.
(Enclose the details)

SOE follows Kathmandu University “Selection Committee Internal Working Guidelines 2067”, for recruiting teaching and non-teaching staff.

Recruitment process of teaching staffs: (See Annex SI-Q14-a)

- Dean of SOE is required to fill a **Faculty Requisition Blank** and submit it to Registrar by the end of May every year for recruiting, hiring and placing the required faculty. (See Annex SI-Q14-b).
- **Selection Committee** decides the nature of selection procedure. Selection procedure criteria can be:
 - Written exam, practical exam, and interview
 - Practical exam, and interview
 - Interview

- **Open Examination:** All eligible candidates are allowed to apply for the vacant post of teaching staff.
- **Vacancy announcement** is published in university website, notice board, and national daily.
- Interested candidates are required to fill a standard **Application Blank**. Application Blanks are available at college website. Along with application other needed documents as stated in requirements needs to be submitted. (*See Annex SI-Q14-c*).
- Interested candidates are required to pay prescribed **examination fee** (*See Annex SI-Q14-d*).
- **Human Resource department** along with concerned people analyze the application form and select those applicants who fulfill all required criteria (*See Annex SI-Q14-e*).
- Selected candidates are provided with an **admit card** (*See Annex SI-Q14-f*).
- Experts from concerned areas are involved in **preparation of questionnaire** for the examination (*See Annex SI-Q14-g*).
- Human Resource department is responsible for conducting all examination.
- Examination papers are corrected by experts from related areas following University guidelines (*See Annex SI-Q14-h*).
- Candidates are selected for interview on the basis of their performance on examination and criteria's set by University (*See Annex SI-Q14-i*).
- A panel of experts and concerned authority are involved in interview process. Selection is done on the basis of personal judgment and guidelines provided by the University (*See Annex SI-Q14-j*).
- While selecting candidates following criteria will be taken into consideration:
 - Academic qualification (*See Annex SI-Q14-k*).
 - Professional contribution (*See Annex SI-Q14-l*).
 - Research work (*See Annex SI-Q14-m*).
 - Performance appraisal (internal recruitment) (*See Annex SI-Q14-n*).
- Candidate/s is selected on the basis of following guidelines (*See Annex SI-Q14-o*).
- Name of the selected candidate/s is published within 30 after the interview.

* **Documents applicants need to submit** (*See Annex SI-Q14-p*).

* **Minimum required qualification for teaching staffs** (*See Annex SI-Q14-q*)

Recruitment process of non-teaching staffs: (*See Annex SI-Q14-r*)

- Dean of SOE is required to fill a **Staff Requisition Blank** and submit it to registrar by the end of May every year for recruiting; hiring and placing the required faculty (*See Annex SI-Q14-s*).
- **Selection Committee** decides the nature of selection procedure. Selection procedure criteria can be:
 - Written exam, practical exam, and interview
 - Practical exam, and interview
 - Interview
 - Group discussion (for officer level or above)
- While fulfilling the vacancy, 50% will be done through open competition (advertisement), and remaining 50% will be done internally.
- **Vacancy announcement** is published in university website, notice board, and national daily.
- Interested candidates are required to fill a standard **Application Blank**. Application Blanks are available at college website. Along with application other needed documents as stated in requirements needs to be submitted (*See Annex SI-Q14-t*).
- Interested candidates are required to pay prescribed **examination fee** (*See Annex SI-Q14-u*).
- Human Resource department along with concerned people analyze the application form and select those applicants who fulfill all required criteria (*See Annex SI-Q14-v*).
- Selected candidates are provided with an **admit card** (*See Annex SI-Q14-w*).
- Experts from concerned areas are involved in preparation of questionnaire for the examination (*See Annex SI-Q14-x*).
- Human Resource department is responsible for conducting all examination.

- Examination papers are corrected by experts from related areas following University guidelines (*See Annex S1-Q14-y*).
 - Candidates are selected for interview on the basis of their performance on examination and criteria's set by University.
 - A panel of experts and concerned authority are involved in interview process. Selection is done on the basis of personal judgment and guidelines provided by the University (*See Annex S1-Q14-z*).
 - While selecting candidates following criteria will be taken into consideration:
 - Academic qualification (10%) (*See Annex S1-Q14-zA*)
 - Seniority (10%)
 - Performance appraisal (30%) (*See Annex S1-Q14-zB*)
 - Selection Examination (30%)
 - Interview (20%)
 - Candidate/s is selected on the basis of following guidelines (*See Annex S1-Q14-zC*).
 - Name of the selected candidate/s is published within 30 after the interview.
- * **Documents applicants need to submit** (*See Annex S1-Q14-zD*).
- * **Minimum required qualification for teaching staffs** (*See Annex S1-Q14-zE*).

15. Number of Full timer and Part timer teaching staff at present:

Particulars	Disadvantaged / Janajatis		Others		Grand Total
	F	T	F	T	
Full Time Teachers (Total) Permanent	1	17	1	30	47
No. of teachers with PhD	1	7	-	16	23
No. of teachers with MPhil			1	3	4
No. of teachers with Masters		11		9	20
No. of teachers with Bachelors					
Full Time Teachers (Total) Contract/ Teaching Assistant (TA)	3	16	4	32	48
No. of teachers with PhD	1	4	-	4	8
No. of teachers with MPhil	-	-	-	-	-
No. of teachers with Masters	-	10	3	19	29
No. of teachers with Bachelors	2	2	1	9	11
Part Time Teachers / Visiting Faculty (Total)					
Part-time teachers with PhD	-	2	1	3	5
Part-time teachers with MPhil	-	-	-	-	-
Part-time teachers with Masters	-	7	1	9	16
No. of teachers with Bachelors	-	1	2	6	7

(F = Female, T = Total)
(See Annex S1-Q15-a,b,c)

16. Give the details of average number of hours/week (class load)

Courses	Full Time Teachers (Total)*				Part Time Teachers (Total)	Total
	Professors and Associate Professors	Assistant Professor	Lectures and Teaching Assistants	Total		
Science (Engineering)	18	25.2	28.8	72	**	
Management	N/A					
Humanities and Social Science	N/A					
Education	N/A					
Law	N/A					

Please add other courses if applicable	N/A		
---	-----	--	--

* Full time teachers need to contribute 7 working hrs a day (1 hr for lunch) for the university. Among the 6 work hr, time allocation for research, teaching, and services varies according to designation.

Professor and Associate professor: Need to contribute 50% of time for teaching activity.

= 50% of 36 hr per week (6hr * 6 days per week)

= 18 hrs per week

Assistant professor: Need to contribute 70% of time for teaching activity.

= 70% of 36 hr per week (6hr * 6 days per week)

= 25.2 hrs per week

Lecturers and teaching assistant: Need to contribute 80% of time for teaching activity

= 80% of 36 hr per week (6hr * 6 days per week)

= 28.8 hrs per week

For detail (See Annex S1-Q16-a)

(= Class load of part time teachers/ visiting faculty depends on the assigned course. There is no specified requirement for time teachers/ visiting faculty)**

17. Number of members of the non-teaching staff of the Institution at present:

Particulars	Disadvantaged / Janajatis		Others		Grand Total
	F	T	F	T	
Administrative Staff	11*	33*	2+14*	8+67*	8+99*
Technical Staff	1	5+3*	1+2*	5+8*	10+11*

School of Engineering is managed by school itself with prominent support from Central Office of Kathmandu University.

(* = Central level staff)

(See Annex S1-Q17-a)

18. Regional profile of the students enrolled in the institution for the current academic year: 2019

No of Students Enrolment From ...	UG		PG		MPhil		PhD	
	F	T	F	T	F	T	F	T
Same district where the institution is located	7	32	1	14	-	-	-	1
Other districts	59	377	7	54		-	-	6
SAARC countries	-	-	-	-	-	-	-	-
Other countries	-	-	-	-	-	-	-	-
Disadvantaged/Janajatis	25	119	5	25	-	-	-	2

Note: F= Female, T= Total in Table 15, 17 and 18.

(See Annex S1-Q18-a,b)

19. Details of the last two batches of students:

Particulars	Batch 1: 2018			Batch 2: 2019		
	Year: Bachelors (2014-2018) Masters (2016-2018)			Year: Bachelors (2015-2019) Masters (2017-2019)		
	Bachelor s	Master s	Total	Bachelor s	Masters	Total
Admitted to the program	247	27	274	348	29	377
a. Within four months of joining	-	-	-			
b. Afterwards	-	-	-			
Appeared for the final year examinations	248	27	275	342	29	371
Passed in the final examinations	238	27	265	334	29	363
Pass % of number appeared (Total)	95.96	100	96.36	97.66	100	97.84
Pass % with distinctions	20.56	77.77	26	16.95	75.86	22
Pass %, (First class)	42.74	22.22	41	44.15	24.13	33
Pass %, (Second class)	32.66	-	29	36.54	-	33
Pass %, (Third class)	N/A	N/A	N/A	N/A	N/A	N/A
Number of students expelled from examination hall if any	-	-		-	-	-

Note: For other types of evaluation system such as GPA, provide respective grades and brief explanation about their ranges in percentage.

Note: Some students take more than 4 years in case of undergraduate and 2 years in case of postgraduate to complete their degree. Few students need to take re-exam for the purpose of GPA make up and some have to appear again for exam as they are withheld before. University has a provision that undergraduate degree needs to be cleared within the duration of 7 years and post graduate within 5 years. Examinations and complete evaluation of all the graduate programs are done by the department itself through concerned faculties and then the compiled grade sheets are sent to examination section at the end of the course.

(See Annex S1-Q19-a,b,c,d; Annex C7-Q106-d)
(SOE follows Grade point average (GPA system)).

The overall academic performance of student is reported by CGPA which is the weighted average of grade values earned.

- Grades earned are assigned in letters A, B, C, and D, as a range 4.0–1.0.

Grade	Grade Value	Remark
A	4.0	Outstanding
A-	3.7	Excellent
B+	3.3	Very Good
B	3.0	Good
B-	2.7	Fair
C+	2.3	
C	2.0	
C-	1.7	

D	1.0	Poor
F	0	Failure
W	-	Withdrawn
IN	-	Incomplete
NC	-	Non-credit

(See Annex S1-Q19-e)

Different criteria for undergraduate and post graduate are application while converting grades in terms of division earned.

	Bachelors (CGPA)	Masters (CGPA)
Distinction	3.5 and above	3.7 and above
First division	3 -3.49	3.25-3.69
Second division	2-2.99	3-3.24
Third Division	N/A	N/A

Grades and their ranges in percentage (See Annex S1-Q19-f)

20. Give a copy of the last annual budget of the Institution with details of income and expenditure. (Attach separately)

Kathmandu University prepares and announces a budget report which includes the details of income and expenditure of School of Engineering. For Fiscal Year 2075/2076 following is the expected income and expenditure.

Income: 294000000.00

Expenditure: 242410000.00

(See Annex S1-Q3-d)

21. What is the institution's '**unit cost**' of education? [unit cost = total annual expenditure budget (actual) divided by the number of students enrolled]. Also give unit cost calculated excluding salary component.

- (a) Unit Cost = total annual expenditure budget (actual)
divided by number of students enrolled

NRs**121,450.19/Year**

Total Budget of Academic Year 076/077: 194,320,319.98

Total Number of Engineering Student enrolled in all semesters and level: 1600

Unit cost=194,320,319.98/1600=139618.75

- (b) Unit cost calculated excluding salary component

NRs. **67,499.67/Year**

Total Budget of Academic Year 075/076: 194,320,319.98

Salary in Academic Year 076/077: 86,320,846.42

Total Number of Engineering Student enrolled in all semesters and level:1600

Unit cost excluding salary component=(194,320,319.98-86,320,846.42)/1600 = 67,499.67

(See Annex: S1-Q3-e).

22. What is the temporal plan of academic work in the Institution?

Semester System ☒ Annual System ☐ Any other (specify)

23. Tick the support services available in the Institution from the following:

Central library ☒ Computer centre ☒ Health centre ☒
 Sports facilities ☒ *Press ☐ Workshop ☒
 Hostels ☒ Guest house ☒ Housing ☒
 Canteen ☒ *Grievance redressal cell ☒ Common room for students ☒
 Any other (specify) -----

*** Press:** No separate press facility is available in the school, but faculty members have access to printing and photocopy services as required. Paid printing and photocopy services are available to students within college premises)

***Grievance redressal cell:** There is no separate grievance redressal cell. However, heads of the institution are responsible for the grievance redressal handling. There is also a provision of separate counseling section which also partly deals with handling of grievances. In addition, different structures like Students Welfare Council (SWC), Faculty Welfare Council, Staff Welfare Council, Human Resource department, and respective department are responsible for dealing with grievances.

(See Annex S1-Q23-a, b)

24. Whether a duly formed Institution Management Committee in place?

Yes ☒ No ☐ If yes provide the composition of the committee in separate sheet

KUSOE is governed by the University's Senate, which is the apex body.

Executive Council (EC) is responsible for looking after overall affairs of school.

Dean acts as Chief Executive Officer (CEO) of the school, as is responsible for day to day operation of the school.

(See Annex S1-Q24-a)

25. Furnish the following details (in figures) for the last three years:

Particulars	Year I (Feb 2016- Jan 2017)	Year II (Feb 2017 – Jan 2018)	Year III (Feb 2018 – Jan 2019)
Working days of the institution	293	292	291
Working days of the library	336	344	343
Teaching days of the institution	203	191	203
Teaching days set by the university	203	191	203
Books in the library	66000	69000	73,200
<u>Journals/Periodicals subscribed by the library</u> National:5 International: 4	9	9	9
Computers in the institution	175 [#]	189 [#]	211 [#]
*Research projects completed and their total outlay	NPR. 203,617,932.23	NPR. 216,518,836.01	NPR.264,192,414.59

**Teachers who have received national recognition for teaching/research/consultancy	-	1	3
***Teachers who have received international recognition for teaching/research/consultancy	2	2	3
****Teachers who have attended international seminars (conferences and meetings also included)	12	76	69
Teachers who were resource persons at national seminars/workshops	1	43	32
No. of hours of instruction against the plan (per year or per semester)	-	-	-

#These are the computers issued under name of School of Engineering; however, different departments also get/purchase computers from different projects and supporting bodies. By now, the total number of computers in SoE is 366.

Note: Please attach the annual calendar of operations of the institution

(See Annex S1-Q25-a)

(See Annex S1-Q25-b)

(See Annex S1-Q25-c)

***Research projects completed and their total outlay** (Various research projects are being taken by the School and duration of project ranges from few months to many years. The amount presented in the table is the total amount spend in that particular year in different research projects)

26. Give the number of ongoing research projects and their total outlay.

S. No	Title of Project*	Funding agency	Amount	Duration (Years)	Collaboration, if any
1	UGC Faculty grant	UGC	NRs. 120000	NA	NA
2	PostgreSQL Conference(SOE)	Post Gre	NRs. 987000	NA	NA
3	ENEP-RENP AC-II-17-04-SOE-Energy Efficient	Energize-Nepal	NRs. 4,795,000	01.12.2017 to 30.11.2020	NA
4	KOICA-IRDP	IRDP	USD 52,309.00	01.10.2019 to 30.05.2020	NA
5	KU-IRDP-KOICA Project AC	KOICA	NRs. 20,000,000	NA	NA
6	COS-WASH-II-KUSOE-EAWAG AC	IHE Delft	Euro 34,000 & USD 15,000	July 2019 to Dec.2023	NA

			& CF 1300		
7	KU-World Bank Project Account	World Bank	NRs. 7,490,000	NA	NA
8	UW KU Bioengineering		NRs. 4,224,000	NA	NA
9	US Embassy Project	US Embassy			NA
10	ENEP-RENP -II-18- 08-SOE-Energy Efficient	Energize-Nepal	NRs. 48,00,000 & Contribution NRs. 6,427,750	01.12.2018 to 30.11.2020	NA
11	TTL-Mai Beni project	CE Construction Pvt. Ltd.	NRs. 10,56,750	06.11.2018 to 06.11.220	NA
12	UGC Faculty grant	UGC	NRs. 160000	NA	NA
13	HEMTA II	H-Plant			NA
14	HEMTA III	H-Plant			NA
15	ENEP-RENP- CETRF	NFA through Energize Nepal	NRs. 7,305,737	14.11.2018 to 13.11.2021	NA
16	RABDEC-KUSOE	City, University of London, GCRF	GBP 5000	17.09.2019 to 17.03.2020	NA
17	ENEP-RENP-CEPE	Energize-Nepal	NRs. 18,498,66	Nov.2018 to Dec.2021	NA
18	PBL South asia project	ERASMUS + Grant	Euro 65,250	Oct.2018 to Oct. 2021	NA
19	TTL-Energize Nepal Project Ac-SOE	Energize-Nepal	NRs. 13,075,928	NA	NA
20	TTL-UGC	UGC	NRs. 20,00,000		
21	TTL-IRDP	IRDP	USD 25,929	1Year	NA
22	ALIEN(Active Learning) AC- KUSOE	ERASMUS + Grant	EURO 45634	15.10.2017 to 14.10.2020	NA
23	UGC Faculty grant	UGC	NRs. 105000	NA	NA
24	SAFER	University Of Bristol	Euro 12,195	01.05.2017 till 30.04.2020	NA
25	IRDP-RCS-	IRDP	USD 32,510	06.02.2019 to 06.30.2020	NA

26	UGC Faculty grant	UGC	NRs. 80000	NA	NA
27	Fransed				
28	ENEP-RENP -II-18-02-SOE-Energy Efficient	Energize-Nepal	NRs. 72,00,000 & Contribution NRs. 34,27,500	01.12.2018 to 30.11.2021	NA
29	UGC Faculty grant	UGC	NRs. 160000	NA	NA
30	UGC Faculty grant	UGC	NRs. 80000	NA	NA
31	ENEP-RENP -II-18-01-SOE-Energy Efficient	Energize-Nepal	NRs. 48,00,000 & Contribution NRs. 2,445,000	01.12.2018 to 30.11.2020	SWAT, Kingdom Bioenergy, University South Eastern Norway
32	UAS TLS	NEA ENGINEERING Company Ltd.	NRs. 5,87,938	2075/07/20 ro 2075/09/20	
33	Energize Nepal 2016-KUSOE AC	RENE & Others	NOK 34.536 Million & NOK 440.33 million	16.07.2016 to 31.12.2021	Hydro Lab Pvt. & Norwegian University of Science and Technology (NINTU)
34	Building Nepal's Institutional Capacity – Higher Education Administrator Workshop	US Department of State – Federal Assistance Award	USD 15,000	October 2019- June 2020	
35	Development of River Water Pump for drinking and irrigation purposes in rural areas	Korea International Cooperation Agency (KOICA)	USD 25,929	June, 2019- July 2020	
36	Piloting of Community based Rural Cold Store for Post-Harvest Storage of Agro Products	Korea International Cooperation Agency (KOICA)	USD 26,692	June 2019- June 2020	
37	Evidence-based planning for the areas of NTIC engagement in the three sectors: Agriculture and Rural Development,	Korea International Cooperation Agency (KOICA)	USD 52,309	October 2019- May 2020	

	Public Health Related Livelihood and Alternative and Renewable Energy in Nepal				
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Source: Based on the information Received from Finance Officer in email dated 11 Feb., 2020 Tuesday.

27. Does the Institution have collaborations/ linkages with international institutions?

Yes ☒ No ☐ If yes, list the MoU signed and furnish the details of active MoU along with important details of collaborations.

S.N O	Institution	Country	Type	Purpose	Date of MoU	Signing Person	Durati on
1	Curtin University	Australia	University		January 18, 2019		
2	Chilime Engineering & Services Company	Nepal	Company		January 18, 2018		
3	IRDP by MOF & GOV of Korea	South Korea	Other		February 6, 2018		
4	Energy Council with DOME (Development Council)	Nepal	Other		May 18, 2018		
5	Nepal Electricity Authority	Nepal	Other		May 24, 2018		
6	NCELL	Nepal	Company		June 14, 2018		
7	Hydro-Consult Engineering Ltd.	Nepal	Company		June 18, 2018		
8	NIC	Nepal	Other		June 22, 2018		
9	Massachusetts Institute of Technology (MIT)	USA	Other		August 2, 2018		
10	Frost & Sullivan	Nepal	Company		August 4, 2018		
11	Yantai Vocational College	China	College		October 14, 2018		
12	World Wildlife Fund	Nepal	INGO		November 5, 2018		
13	NEAEC	Nepal			November 19, 2018		
14	Sun Yat Sen University	China	University		December 12, 2018		
15	e-Nable Nepal	Nepal	NGO		December 26, 2018		
16	Society of Public Health Engineers- Nepal (SOPHEN)	Nepal	Other		30th March 2018		

17	Mokopo National University Korea	Korea	Other		27th June 2018		
18	Furming Association	Japan	Other		6-Jul-18		
19	Korea Institute of Energy Research	Korea	Other		7th Aug 2018		
20	Hydro Consult Engineering Ltd.	Nepal	Company		6th Septembdr 2018		
21	World Wildlife fund, Inc.	Nepal	INGO		5th November 2018		
22	Fusemachines Nepal pvt. Ltd	Nepal	Company		27-Nov-18	Department of Computer Science & Engineering and Fusemachines Nepal pvt. Ltd	
23	Fusemachines Nepal pvt. Ltd	Nepal	Company		2018 November 27		
24	e-NABLE Nepal	Nepal	NGO		18th Dec 2018		
25	Incheon National University	South Korea	University	To promote cooperation between the parties, through information and knowledge s haring, technical capacity building, collaboration of projects of mutual interest, and joint consultations with industry, academia, and other stakeholder groups	7th August, 2017	Dr. Manish Pokharel, Head, Department of Computer Science and Engineering, Ku and Dr. Seung-Sik Choi, Head, Department of Computer Science and Engineering, INU	3 Years
26	NEA Engineering Company Ltd.(NEC), Nepal	Nepal	Company		7/30/2074		
27	Health informatics Society of Sri Lanka	Sri Lanka	Other		Oct. 2015 14		
28	Chang'an University	China	University		Oct. 2015 19		
29	Thammasat University	Thailand	University	Promote the academic collaborations and exchanges that will be based uopn the	29th May, 2014	Sirindhorn International Institute of Technology, Thammasat University: Prof. Dr. Somnuk Tangtermsirikul, Director; Assoc. Prof. Dr. Waree	5 Years

				mutual interest of both institutions.		Kongprawechnon, Assistant Director for International Affairs and Corporate Relations; KU: Prof. Dr. Bhola Thapa, Dean, School of Engineering; Prof. Dr. Bim P. Shrestha, Associate Dean (Research and Others), School of Engineering	
30	Land Management Training Center (LMTC) of Ministry of Land Reform and Management (MoLRM)	Nepal	Other	To run Master in Land Administration program in the Department of Civil & Geomatics Engineering (DCGE), KU	12th January, 2014	Prof. Dr. Bhola Thapa, Registrar on behalf of Kathmandu University and Mr. Kalyan Gopal Shrestha, Executive Director of Land Management Training Center	
31	Seoul National University, School of Mechanical and Aerospace Engineering	South Korea	University	To endorse efforts between the institutions to establish cooperative ties for research and education for the BK21 Plus Program supported by the Ministry of Education of the Republic of Korea.	12th June, 2013	SNU: Prof. Haecheon Choi, Head, Dept of Mechanical and Aerospace Engineering; KU: Bim Prasad Shrestha, PhD, Associate Professor and Head, Department of Mechanical Engineering	7 Years
32	Mahidol University	Thailand	University	To foster collaboration in the teaching of both parties through degree and non-degree student exchanges and training activities, staff exchanges and training activities, collaborative research activities and other joint academic activities that both universities agree upon.	29th March, 2012	Faculty of ICT, Mahidol University: Assoc. Prof. Dr. Jarernsri L. Mitraoanont, Dean; SoE, KU: Prof. Dr. Bhola Thapa, Dean.	5 Years
33	Korea Maritime University	South Korea	University	In furtherance of both the university's mutual interest in the field of	19th February, 2012	Korea Maritime University: Young-Ho LEE, Ph. D. Professor; KU: Prof. Dr. Bhola Thapa	5 Years

				education and research and as a contribution to increased international cooperation.			
34	PuKyong National University, College of Engineering	South Korea	University	1. Collaborative research activities and publications; 2. Exchange of invitations to scholars for lectures, talks and sharing of experience; 3. Exchange of invitations to scholars to participate in conferences, colloquia, and symposia; 4. Exchange of information in the fields of interest to both institutions; 5. Exchange of faculty members, and students for education and research.	21st February, 2011	PuKyong National University: Prof. Dr. Yeon-Won Lee, Dean; Dr. Man-Gon Park, Professor/Coordinator; KU: Prof. Dr. Bhola Thapa, Dean; Dr. Sanat Kumar Bista, Graduate Program Coordinator, Dept of Computer Science and Engineering	5 Years
35	University of Twente	Netherlands	University	Field of interest; Land Administration and Related Studies; Exchange of knowledge; Exchange of staff; (Co)organization of research and development, education and training and advisory projects and services; Other areas to be jointly identified and mutually agreed.	12th June, 2011	University of Twente: Prof. Dr. Tom Veldkamp, Rector/Dean; KU: Prof. Dr. S. R Sharma, Vice Chancellor	3 Years
36	Johannes Kepler University (JKU)	Germany		To develop academic and educational cooperation	31st May, 2007	JKU: Prof. Dr. Friedrich Schneider, Vice-Rector for Foreign Affairs; KU:	3 Years

				and to promote relations and mutual understanding between the universities. In particular, this MoU shall aim at fostering the collaborative relation between the departments of Computer Science.		Prof. Dr. Bhadraman Tuladhar, Registrar	
37	University of Waterloo	Canada	University	1. To encourage faculty members to visit, participate in the academic programs; 2. Facilitate opportunities for students to visit and gain experience; 3. Cooperate in seeking external funding to support above two objectives; 4. Encourage the exchange of teaching materials, subject to intellectual property protection; 5. Designate one or more individuals at each institution to coordinate the relationship	15th February, 1999	UoW: Dr. James Downey, President, Dr. Carolyn Hansson, Vice-President, University Research (Coordinator is Dr. K. Ponnambalam, Faculty of Engineering); KU: Dr. S. R. Sharma, Vice Chancellor (Coordinator is Dr. Kai Bedringas, SoS and SoE)	5 Years
38	Asian Institute of Technology	Thailand	Other	To promote academic collaboration for mutual benefit; Staff Participation; Activity Co-ordination.	13th August, 1999	AIT: Prof. Jean-Louis Armand, President; Prof. Chongrak Polprasert, Dean, School of Environment, Resources and Development; KU: Prof. Dr. S. R. Sharma, Vice Chancellor; Prof. Surendra Raj Kafle, Dean, School of Science; Prof. Bhadra Man Tuladhar, Dean, School of Engineering and School of Arts	

39	Nipissing University	Canada	University	1. Visits of staff for short and long duration in connection with joint research or supervision or participation in the teaching activity; 2. Exchange up to four undergraduate students per year in each direction. Each student will spend one or more academic terms/semester s.	2nd February, 1998	NU: President and Registrar (Co-ordinators of NU are Denis Lawrence, Registrar, and David Rowbotham, Assistant Professor of Geography); KU: Dr. S. R. Sharma, Vice Chancellor; Co-ordinators of KU - Dr. B. M. Tuladhar and other faculty as designated by KU.	
40	Indian Institute of Science	India	Other	a. Exchange of Scientific, academic and technical information and appropriate academic materials and other information of mutual interests; b. Academic exchanges, including mutual visits of faculty members and students to pursue research, to tecture and to study; c. Inditify opportunities for exchanges and cooperation and joint research and development in disciplines of mutual interests, d. identify opportunities for commercialisat ion of technology, and e.	27th January, 1998	IIOS: Director in Charge; KU: Prof. Dr. Suresh Raj Sharma, Vice Chancellor	3 Years

				Organization and participation of joint academic and scientific activities such as seminars, workshops and conferences;			
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(See Annex S1-Q27-a)

28. Does the management run other educational institutions besides the institution?

Yes tick ☐ No ☐ If yes, give details.

Kathmandu University has established and runs Technical Training Centre (TTC) with a mission to fulfill the skilled workforce in context of advancing technologies in automobile and manufacturing sectors. TTC was established with financial and technical support from Korea International Cooperation Agency (KOICA) to provide skill oriented training programs to under privileged youths. KUTTC is going to run short term technical trainings on Automobile, Motorbike, Carpentry, Welding and Machining. TTC is an autonomous technical training institute operated by Kathmandu University and is managed by SoE, where SoE dean acts as a chair. (See Annex: S1-Q28-a)

29. Give details of the resources generated by the institution last year through the following means:

Source of Funding	Amount(NRs.) 2067/68
UGC (Research and Development work) Government grants	161,008,050.00
Donations	
Fund Raising drives	
Alumni Association	
Research and Consultancy	264,192,414.59
Fee from Self-financed/initiated courses	
Fees from regular programs	692,337,324.91
Any others, Other Grants	29,652,745.22

(See Annex: S1-Q3-e).

(* = Amount is for Kathmandu University as a whole)

SECTION B

The marking scheme except otherwise specified in the criteria will be as follow:

Yes with justification and with evidence =1(full marks); justification without full evidence=0.75;
apparent justification without record = 0.5 apparent initiatives =0.25; No= 0)

(The marking division applies proportionately to the allocated marks where necessary.)

BENCHMARK-WISE INPUTS FOR INSTITUTIONAL SSR

CRITERION 1: POLICY & PROCEDURES (15 MARKS)

1. Are there clearly defined vision, mission, goals, and objectives of the Institution in written?

Yes ☒ No ☐ If yes, mention and attach the document.

School of Engineering (SOE) shares the vision, objectives, and strategies of Kathmandu University.

Mission: “to provide quality education for leadership”

Vision: “to become a world-class university devoted to bringing knowledge and technology to the service of mankind”

Objectives and Trust of Kathmandu University

Higher education should become a high quality education resulting in the development of overall personality of the student. As education shapes human life and the type of society in which we live, it becomes an investment to improve the quality of life for everyone in the nation. Therefore, KU is being developed with objectives to:

- Promote all round development of the students' abilities and personalities;
- Develop awareness about the role of science and its application in understanding problems of the contemporary society;
- Extend and disseminate knowledge and foster its application;
- Create knowledge industry through accessing the sources of knowledge at the global level, processing them and providing access to such knowledge to the people.
- Establish a community of scholars, students and staff in which understanding and wisdom can grow and flourish.

The main thrust of KU is to make it a research-cum-teaching university in science, management, engineering medical sciences, arts and education.

Strategy of Kathmandu University

The long- term strategies for its development are:

- Achieving excellence in teaching;
- Providing strong support to professional course;
- Strengthening research activities in the fields of environment, energy, medicinal plants and information technology.

In addition SOE has its own vision and mission.

Vision	“To become a premier engineering education institute devoted to bringing knowledge and technology to the service of mankind”
Mission	“To provide quality education for engineering and technological leadership”
Goals	“To develop quality leaders equipped with the quality knowledge and skills to solve the complex engineering problems and produce innovative technologies alongside with knowledge as a contribution to the society.”

Objectives	<ol style="list-style-type: none"> 1. To provide high quality education and research globally. 2. To create a strong synergy between Science, Engineering, Management and other interdisciplinary fields. 3. To carry out teaching and research in branches of Engineering, Science and Technology that serve as the pressing needs of the country from a socio-economic as well as techno-social perspective. 4. To foster creativity and the spirit of innovation among students so that the motivation for business incubation and entrepreneurship gets developed in the Undergraduate level itself. 5. To let the ethical code of researchers and the engineering profession to be natural guidelines throughout the education.
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(See Annex C1-Q1-a, b)

2. Are there clearly defined plans, programs and strategies to achieve its specific goals and objectives?
 Yes ☒ No ☐ If yes, mention and attach the document.

To achieve specific goals and objective, school has developed a strategic plan. Strategic planning is done for the duration of 5 years. At present school is following Strategic Plan 2020-2025.

Strategic Plan 2020-2025 *(See Annex C1-Q1-b)*.

In addition to Strategic Plan, every department of School of Engineering develops their own annual plan.

Annual Plan of School of Engineering *(See Annex C1-Q2-a)*.
 Sample Annual Plan, Department of Civil Engineering *(See Annex C1-Q2-b)*.
 Sample Annual Plan, Department of Chemical Engineering *(See Annex C1-Q2-c)*.
 Sample Annual Plan, Bachelor in Architecture *(See Annex C1-Q2-d)*.
 Sample Annual Plan, Department of Mechanical Engineering *(See Annex C1-Q2-e)*.
 Sample Annual Plan, Department Geomatics Engineering *(See Annex C1-Q2-f)*.

3. Are there duly formed organizational structures where the policies of the Institution are formulated, reflected, reviewed and updated?
 Yes ☒ No ☐ If yes, mention the organizational chart and member compositions.

A duly formed organizational structure prevails where the policies of institutions are formulated and which guides the operational activities of the school.

- Organizational structure *(See Annex C1-Q3-a)*.
- Committee Structure *(See Annex C1-Q3-b)*.
- Organizational Structure SOE *(See Annex C1-Q3-c)*.
- **Senate**
 The Senate is the supreme governing body of the university which, inter-alia, decides about major issues of University. Senate acts as the apex body, and is formed following Kathmandu University act.

SN	Name	Designation	Contact No.	Email
1	Rt. Hon'ble. Prime Minister	Chancellor		info@nepal.gov.np

2	Hon'ble Minister of Education	Pro-Chancellor		info@moe.gov.np
3	Prof. Dr. Ram Kantha Makaju Shrestha	Vice-Chancellor	9802000027	vc@ku.edu.np
4	Prof. Dr. Subodh Sharma, Registrar	Member Secretary	9801370061	registrar@ku.edu.np
5	Dr. Usha Jha	Member, National Planning commission	9851051582	ceosamjhauta@gmail.com
6	Mr. Mahesh Prasad Dahal	Secretary, Ministry of Education	9851238738	infomoe@moe.gov.np
7	Dr. Rajan Khanal	Secretary, Ministry of Finance	9851106244	moev@mof.gov.np
8	Prof. Dr. Sagar Raj Sharma	Dean, School of Arts	9801210036	sagar@ku.edu.np
9	Prof. Dr. Mahesh Nath Parajuli	Dean, School of Education	9841555750	mahesh@kusoed.edu.np
10	Prof. Dr. Damber Bahadur Nepali	Dean, School of Engineering	9801210003	damber.nepali@gmail.com
11	Prof. Dr. Bijay K.C.	Dean, School of Management	9841229730	bijaykc@kusom.edu.np
12	Prof. Dr. Rajendra Prasad Koju	Dean, School of Medical Science	9802000028	kusms@ku.edu.np
13	Prof. Dr. Kanhaiya Jha	Dean, School of Science	9801210036	jhakn@ku.edu.np
14	Mr. Rishikesh Wagle	Dean, School of Law	9801210034	
15	Mr. Ashok Kumar Byanju (Shrestha)	Mayor, Dhulikhel Municipality	9851073175	askbyanju@gmail.com

16	Mr. Laxmi Narsingh Bade	Mayor, Banepa Municipality	9851056975	
17	Dr. Bal Gopal Baidya	Educationist	9841390601	info@newera.com.np
18	Mr. Bidyadhar Mallik	Educationist	9851033035	vidyamallik@hotmail.com
19	Dr. Tritha Bahadur Shrestha	Educationist	9849036991	tirthbshrestha@gmail.com
20	Mr. Rameshwor Khanal	Educationist	9840051295/9801031295	rameshore@outlook.com
21	Dr. Swarnim Wagle	Educationist	9855066107	swarnim.wagle@gmail.com
22	Mr. Rajendra Khetan	Donor	4446400/9818154468	r@rkhetan.com
23	Mr. Sanjeev Raj Bhandari	Donor	9851020311	
24	Mr. Gyanendra Lal Pradhan	Industrialist	9851021222	glp2067@gmail.com
25	Prof. Dr. Chanda Karki	Principal, Affiliated College	9851026793	info@kmc.edu.np
26	Prof. Dr. Bal Chandra Luitel	Teacher Representative	9851188175	bcluitel@kusoed.edu.np
27	Dr. Dhiraj Giri	Teacher Representative	9841534664	dgiri@ku.edu.np
28	Mr. Sudhir Kumar Sah	Student Representative		
29		Librarian		

(See Annex S1-Q3-a,b)

- Board of Trustee**

Board of Trustee is entrusted with responsibilities of approving long term plans, generating, and controlling of resource.

Type of Membership	Name and Designation
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Chairman	Mr. Daman Nath Dhungana, Former Speaker of Parliament
Life Member	Mr. Ramesh Nath Dhungel, Management Expert
	Mr. Rana Bahadur Shah, Founder Donor
	Dr. Bhadra Man Tuladhar, Founder Campus Chief, Kathmandu Valley Campus
	Dr. Sitaram Adhikary, Founder Registrar
	Dr. Suresh Raj Sharma, Founder Vice Chancellor
Member	Mr. Krishna Bahadur Manandhar, Act. Governor Rastra Bank
	Mr. Bel Prasad Shrestha, Former Mayor of Dhulikhel
	Dr. Ram Kantha Makaju Shrestha, Vice Chancellor

(See Annex C1-Q3-d)

- Executive Council**

*[*KUSOE is governed by the University's Senate and the Executive Council (EC) is responsible for the looking after overall affairs of the school]*

The Executive Council (EC) executes the decisions and directives of the Senate, follows the policy and guidelines of Government of Nepal, prepares and presents annual programs, budget, progress and audited reports to the Senate, accepts grants and donations, manages funds, assets-movable and immovable and disposes of property, provides oversight to programs run and reports on them, prepares draft rules and submits them for approval, appoints personnel as required, fixes terms and conditions of their services and presents them to the Senate.

SN	Name	Designation
1	Prof. Dr. Ram Kantha Makaju Shrestha (VC)	Chairperson
2	Prof. Dr. Subodh Sharma (Registrar)	Member-Secretary
3	Dr. Damber Bahadur Nepali (Dean SoE)	Member
4	Dr. Rishikesh Wagle (Dean SoL)	Member
5	Prof. Dr. Bim Prasad Shrestha (Teachers' Representative)	Member

(See Annex S1-Q3-a,b; S1-Q24-a)

- Policy and Coordination Committee (PCC)**

To collect views of concerned stakeholders in regards to policy level issue Policy and Coordination Committee is formed. Vice Chancellor, Registrar, Examination Controller, Chief Administrative Officer, Deans, and representative for Executive Council are the members of PCC. However, this committee is not in functional mode now.

- Academic Council**

The Academic Council is the main educational and academic authority of the university. It sets up the standard of learning/ teaching, curricula, quality of teaching materials, types of examinations, methods of evaluations, size of the classes and admission requirements (See Annex C1-Q3-e).

- Subject Committee**

Subject Committee is responsible for developing curriculum, deciding on credit hours and teaching methods, and other course related tasks (See Annex C1-Q3-f).

- **Faculty Board**

Faculty Board is responsible for looking after overall educational and academic activities of the school
(See Annex C1-Q3-g).

- **Research Committee**

Research Committee is responsible for maintaining quality assurance of various research degrees like MS by Research, MPhil, PhD. This committee prepares and recommends research guidelines and evaluation criteria for research degrees to Faculty board of school and finally approved from the Academic Council (See Annex C1-Q3-h).

- **Appeal Committee**

Any issue concerning staffs or faculty that requires discussion/punishment is dealt by appeal committee (See Annex C1-Q3-i).

- **Selection Committee**

For the purpose of selection/promotion of staffs or faculty selection committee is formed.
(See Annex C1-Q3-j)

- **Exam Board**

Exam board is responsible for formulating rules and regulations regarding exam.
(See Annex C1-Q3-k)

- **Library Committee**

Library committee is responsible for overall functioning of the library. Committee is responsible for planning library development activities as well as setting library rules and regulation.
(See Annex C1-Q3-l)

- **Student Welfare Council**

Student welfare Council looks into affairs of students and facilitates various students' activities through formation of different clubs. (See Annex C1-Q3-m)

4. Has the Institution adopted any mechanism/process for internal quality monitoring and checks?

Yes ☒ No ☐ Justify with supporting documents.

- **Subject Committee**

Several subject committees, which are chaired by the Head of Department (HOD) of the concerned subject check and revise course content as per need. The revised course content is presented in the Faculty Board of SOE and finally to Academic Council and with approval of academic council revision is done.
(See Annex C1-Q3-f)

- **Academic calendar**

Academic Calendar is used to check whether academic activities are taking place as per plan or not (See Annex S1-Q25-a, Annex C1-Q4-a)

- **Course plan**

Faculty members are required to prepare course plan at the beginning of the season. Head of Department is responsible to collect course plan from all faculty members. It is expected that faculty members follow the prepared course plan. (See Annex C1-Q4-b)

- **Syllabus**

Prescribed syllabus is followed while preparing lesson/course plan. Faculties are required to cover all contents mentioned in the syllabus. (See Annex C1-Q4-c)

- **Examination**

In –semester and end-semester examinations are conducted in timely manner to check whether students are following the course content or not. Examinations help in checking students understanding of course contents. (See Annex C1-Q4-d)

- **Students Feedback of Instructional Quality**

Faculty provides a feedback form to students at the end of the course. Students are required to fill the form basing on the staff members teaching in this subject/chapter. Feedback form has been developed but the system is not made compulsory but in future School has planned to strictly practice this system. (See Annex C1-Q4-e)

- **Annual performance planning form**

The form is to be completed jointly by the faculty and his/her HOD or Dean before the start of the financial year, i.e. Srawan/ July. At the time of monthly review and feedback in Magh/ January, this plan must be reviewed and, if necessary, should be adjusted by using a new form.) This system is not made compulsory but in future School has planned to strictly practice this system. (See Annex C1-Q4-f)

- **Bimonthly Progress Report**

The form is to be completed by the faculty and his/her HOD/Dean before 3rd of every second month starting from Shrawan/ July recording work progress in the last two months. The monthly work plan in the annual performance plan must be referred to at the time of completing this form. The HOD/Dean must have informal review before giving comments and making assessment.) This system is not made compulsory but in future School has planned to strictly practice this system. (See Annex C1-Q4-g)

- **Performance review**

Performance Appraisal Report – Faculty

This form is to be completed by the faculty, his/her HOD/Dean, the reviewer and the Human Resource Section annually in the first week of July. The annual performance plan and the bi- monthly progress reports for the closing year must be referred to while completing this form. The performance planning, appraisal and feedback session must take place before or at the time of completing the form.)

Performance Review and Development System – non teaching staff

The form is filled by HR section to access the effectiveness of the staff members and identify the areas for improvement. (See Annex C1-Q4-h)

5. Is there any document of the institution to specify the job responsibilities of departments, units and individuals?

Yes ☒ No ☐ If yes, give details/reference.

University Statue and acts have stated job responsibility of different individuals and units.

Individual

- Responsibility of Vice Chancellor
- Responsibility of Registrar
- Responsibility of Dean
- Responsibility of Faculty
- Responsibility of non-teaching staff

(See Annex C1-Q5-a)

Units

- Senate (See Annex S1-Q3-a,b)
- Executive Council (See Annex S1-Q3-a, b; Annex S1-Q24-a)
- Board of Trustee (See Annex C1-Q3-d)
- Academic Council (See Annex C1-Q3-e)
- Subject Committee (See Annex C1-Q3-f)

- Faculty Board (*See Annex C1-Q3-g*)
- Research Committee (*See Annex C1-Q3-h*)
- Selection Committee (*See Annex C1-Q3-j*)
- Exam Board (*See Annex C1-Q3-k*)

6. Is there any defined and written scheme to evaluate the pre-defined job responsibilities of departments, units and individual staff?

Yes ☒ No ☐ If yes, produce those schemes and examples of some practices

The system of employee performance appraisal is practiced by the school. A well designed performance appraisal forms are used to evaluate the performance of staffs and faculty members.

- **Performance Appraisal Report – Faculty**

This form is to be completed by the faculty, his/her HOD/Dean, the reviewer and the Human Resource Section annually in the first week of July. The annual performance plan and the bi-monthly progress reports for the closing year must be referred to while completing this form. The performance planning, appraisal and feedback session must take place before or at the time of completing the form.)

- **Performance Review and Development System – non teaching staff**

The form is filled by HR section to access the effectiveness of the staff members and identify the areas for improvement.

(*See Annex C1-Q4-h*)

7. Does the institution have strategic plan and action plan emphasizing on team work and participatory decision making and a scheme for information sharing?

Yes ☒ No ☐ If yes, give details.

- To achieve specific goals and objective, the school has developed a strategic plan. Strategic planning is done for the duration of 5 years. At present school is following Strategic Plan 2008-2013.

Strategic Plan (*See Annex C1-Q1-b*)

- To encourage team work and participatory decision, various **meetings** are held which acts as a platform for sharing ideas and views. Decisions are taken through meeting held among concerned people.
 - Sample of **Staff meeting** minute (*See Annex C1-Q7-a*)
 - Sample of **Decision making through committees (meeting minutes)**
 - **Subject Committee** (*See Annex C1-Q7-b*)
 - **Research Committee** (*See Annex C1-Q7-c*)
 - **Faculty Board** (*See Annex C1-Q7-d*)

Information sharing: If information needs to be shared among all concerned people it is shared by using **notice board and websites, and when applicable national dailies.** (*See Annex C1-Q7-e*)

If information needs to be shared only among few concerned people related meeting are held.

8. Does the institution have program(s) to strengthen the regular academic programs through other self-sustaining programs/courses and others?

Yes ☒ No ☐ If yes, give details.

School has established a Technical Training Center (TTC) in support of Korea International Cooperation Agency (KOICA). The objective of the project is to produce skilled and technical workforce that is capable of adaptation of the technology as per the need of industrial and labor market.

Similarly School will Continue collaborative programs of handling and operating IT Park of Nepal Government and Panauti Hydropower for academic program and research facilities. With the concerned department of Nepal Government, KU has made understanding that the available resources of the respective premises can be used for educational and research purposes. SOE has planned to exploit such facilities and continue to run similar programs with other stakeholder which could facilitate both KU and its stakeholders.

(See Annex C1-Q8-a,b and Annex S1-Q28-a)

9. Are there any formal provisions under which the institution brings “stakeholders or community feed backs and orientation” in its activities?

Yes ☒ No ☐ If yes, give details.

Yes, University has a provision that major stakeholders and representatives from community are represented in the Senate, so that they can give their valuable comment and have their say in activities.

Honorable Prime Minister, Member of Parliament, Member of National Planning Commission, Secretary-Minister of Education, Secretary- Minister of Finance, Mayor - Dhulikhel Municipality, Mayor – Banepa Municipality, Educationist, Donor, Industrialist, Principal – Affiliated Colleges are made members of Senate. Many major decisions related to university are made through formal approval (through meetings) of Senate members.

Senate composition *(See Annex S1-Q3-a,b)*

Sample Senate meeting minute *(See Annex C1-Q9-a)*

Institution committee comprises experts and stakeholders from related fields. Feedbacks of stakeholders are collected during meeting.

10. Were any committees/external agencies appointed during the last three years to improve the organization and management?

Yes ☒ No ☐ If yes, what were the recommendations?

Kathmandu University including school of engineering forms different committees time and again in order to make decisions or to receive recommendations on verities of issues such as student welfare, teacher welfare, exam conduction, new admission, scholarship, procurement, construction etc. Apart from that the existing committee of Kathmandu University like academic council, subject committee, faculty board, and senate continuously work on this issue.

(See Annex C1-Q10-a)

11. Are the students involved in institution management system and quality assurance?

Yes ☒ No ☐ If yes, give details.

Students are involved in institution management system and quality assurance through **Student Welfare Council (SWC)**.

- Active involvement of SWC on Student Logistic Committee. If there is any issue or problem in regards to canteen food or affairs related to students, SWC plays an influential role in addressing the issue by coordinating with Student Logistic Committee.
- Members of SWC actively participate and are involved in various committees whose activities influence students.
- If any deserving student is deprived of scholarship, SWC has the right to put their points with justification to the Registrar.

(See Annex C1-Q3-m)

Students also involved in institution management system and quality assurance through **Senate, IQAC, and Kathmandu University Hostel Management Committee (both in Boys and Girls Hostels)**.
(See Annex S1-Q3-a,b; C1-Q11-a,b)

12. Has there been an academic audit? Justify it.

- a. by the university ☐
b. by the Institution ☒

Please attach the copies

- UGC in 2012 has accredited this school of engineering and had provided the Peer Review Team Report and taking that as our baseline audit the institution has always been involved to enhance its academic standard.
- Nepal Engineering Council which is a government Governing body to set norms and standards for engineering education in Nepal timely audits the program, facilities and also registers the students who graduate from Kathmandu University school of engineering. NEC also visits institutions every year to evaluate to examine the facilities provided by the institution and to ensure whether that is adequate or not.
- IQAC formed in the school is also responsible to make a proper audit on timely manner. IQAC guidelines will be developed and will regularly carry out for academic audit in coming years.
- School/ examination center maintains a proper database of student's grades and list of graduates. School/examination center analyses the results of students in timely manner. If the results are not as per expectation then consultation with concerned faculty or department is done. To ensure that gender balance is maintained as far as possible school/examination center timely maintains a datasheet showing prevailing gender composition.

See Annex C1-Q12-a

See Annex C1-Q12-b

See Annex S1-Q18-a,b

- School in timely manner makes revision and changes in curriculum. At times as per need new courses are also introduced.

Course content revision

Introduction of new course

Course dropped and replaced with new course

Changes in credit hours

(See Annex C1-Q12-c)

13. Is there any specific mechanism to combine teaching and research?

Yes ☒ No ☐ If yes, give details

Yes, school has mechanism to combine teaching and research through following means:

- **Internship /Project work / dissertation:** Course curriculum for both undergraduate as well as postgraduate students has been designed so as to involve students in relevant project works/ internship/ dissertation. Project work/ internship / dissertations are taken as a separate credit course ranging from 2 credits – 6 credit depending on departments. A supervisor is appointed to help students during project work/ Internship.

Sample project work /dissertation/ internship guidelines (See Annex C1-Q13-a)

- **Research projects**

Students are assigned to undertake independent or group research project as a requirement for completion of different courses by the faculty. A students' project exhibition Kathmandu University Project Exhibition (KUPEX) is organized to showcase students' achievements.

- **Assignments**

Majority of the assignments are of analytical nature requiring students to get engaged in research work.

In addition to these there is a separate Research Committee which takes care of research degrees like MS by Research, MPhil and PhD. *(See Annex C1-Q13-b)*

14. Have you observed any positive outcomes of combination of teaching and research?

Yes ☒ No ☐ If yes, give details.

Yes, project work/internship opportunity has been instrumental in **linking students** with their **related industry**. It has also helped industry and potential job providers to get acquainted with school students. Many students (**tracer study**: some departments have started and some are planning to start) have been employed through project work/ internship.

In addition to exposure, students have delivered a research report which is beneficial for them as well as for other interested students and researchers.

15. Provide institution specific other innovations which have contributed to its growth and development.

- **Turbine Testing Laboratory (TTL):** TTL is established with major objective to facilitate academic and development activities related to Hydropower. It is collaborated and built under major support by NORAD.
- **Directorate of Research, Development, and Consultancy (RDC):** RDC is aimed at providing research enabling environment, motivation and support in research for faculties and students by means of clear research policy and efficient administrative procedures. RDC policy and guidelines are so designed as to reflect the vision and goal set by Kathmandu University on the basis of its past experiences, available expertise, and future planned activities.
- **Collaborative Programs:** School is continuing the collaborative programs such as handling and operating of IT Park of Nepal Government and Panauti Hydropower for academic program and research facilities. With the concerned department of Nepal Government, KU has made understanding that the available resources of the respective premises can be used for educational and research purposes. SOE has planned to exploit such facilities and continue to run similar programs with other stakeholder which could facilitate both KU and its stakeholders. Similarly School has established a Technical Training Center (TTC) in support of Korea International Cooperation Agency (KOICA). The objective of the project is to produce skilled and technical workforce that is capable of adaptation of the technology as per the need of industrial and labor market.

(See Annex C1-Q8-a,b, Annex S1-Q28-a, Annex C4-Q48-b)

CRITERION 2: CURRICULAR ASPECTS (10 MARKS)

16. Is there any provision for ensuring consistency of teaching and learning with the academic goals and objectives of the institution?

Yes ☒ No ☐ If yes, give details.

The academic mission of our institution is to provide quality education for leadership and vision is to become a world class university devoted to bringing knowledge and technology to the service of mankind. In order to meet the objective of world class university in engineering, the common course in teaching and learning is maintained by developing the academic calendar, assigning the credit hours for each program. The subjects are made common in the first year of all undergraduate engineering program such that there is a provision of mobility to switch to the other program during first year.

The course is delivered based on the basis of syllabus which is approved from the subject committee. Therefore, there is a consistence in the delivered course to the all the batches unless and until the content is changed and approved again. The syllabus of the course is provided to the students to facilitate in teaching and learning.

In addition, to maintain consistency, there is a provision of archive of the previous delivered course in e-learning portal <http://elf.ku.edu.np/login/index.php>.

The Academic calendar of the School (*See Annex S1-Q25-a*)

Lecture Plan of the course (*See Annex C2-Q16-a*)

Sample of Syllabus for Master in Land Administration (*See Annex C2-Q16-b*)

Course Syllabus of 1st year (*See Annex C2-Q16-c*)

17. Are programs flexible enough to offer students the following benefits?

- a. Time frame matching student convenience ☒ ☐

The master program do have some flexible time frame matching approach. There is a flexibility for the master program regarding time frame. For instance, the master class of land administration and Msc in geoinformatics is running in the evening after 5:00 P.M. The rational is to match time frame of the job holder student and mid-career professional. Flexibility normally permitted to complete the course in double the course duration. However, UG program can be completed within 7 years (*See Annex (C2-Q17-a)*)

- b. Horizontal mobility ☒ ☐

Students have the option to change their department/course during first year. Students have opportunity to move to another university and spend one semester with a provision for credit transfer. (*See Annex C2-Q17-b*)

- c. Elective options ☒ ☐

Students are provided with a range of elective subjects considering the need to the job market during the final year of their undergraduate level. In addition, the electives are provided in the master program in two semesters as far as per the availability of expertise. (*See Annex C2-Q17-c; Annex C2-Q16-b*)

18. Indicate the efforts to promote quality of education with provision of skills transfer among the students such as (0.5 x 5 = 2.5)

- a. Capacity to learn ☒ ☐

Project based learning: Students are given an independent project/ group project work in various semesters based on the theoretical they will study in that particular semester. This will enhance the capacity to explore beyond the content of the subject matter and enhance their capacity to self-learning and creativeness.

Group Discussion: The group project that has to be done by the students enhances their capacity to work in team and also knowledge and skill transfer within their peers is possible.

Assignments: Different types of assignment were given to the students with different types of assignments. The main objective of the assignments is to enhance student's learning habit and analytical skills.

Talks program: Talks program on course related issues are being conducted by inviting expertise. For example, talk program on space education from delegation from Jaxa has been conducted (See Annex C2-Q18-a)

Lecture series: Various lecture series are organized to give knowledge in the scientific development in the course related issues. For instance: Computer Seminar Series organized by Department of Computer Science and Engineering. In this series, the experts of particular topic are invited. (See Annex C2-Q18-b)

Conducting seminars/workshops: Students are engaged in seminars/workshop of their interest areas relevant to course. For example: A interaction workshop titled “*Flight 4 Purpose : Combating land tenure insecurity in Nepal’s remote and vulnerable areas using UAVs*” was conducted jointly by Department of Geomatics Engineering, Kathmandu University and Kadastre International, Netherland on 26 July, 2019. In the workshop the students studying undergraduate program have attended. For Detail (See Annex C2-Q18-c)

Excursion /Educational Tour: The excursion and educational tour is also a mechanism to promote and enhance knowledge of the students. As per the course requirement students are taken for educational tour to Nepal and India. During tour, the students will be taken to visit various spots, organizations, project site as per relevancy of the program. For instance: students are taken to various hydropower stations, irrigation projects. Usually trips are theme based and after the trip students are responsible to deliver a written report or a presentation. The faculties are associated during the tour to provide them proper guidance in gaining the academic knowledge. (See Annex C2-Q18-d)

Awards: Students are encouraged to enhance their performance in project works through awards and cash prizes for their best performance. (See Annex C2-Q18-e)

Exchange Programs: Student exchange programs have been started to enhance the capability of students besides strengthening the institutional ties with international universities. (See Annex C2-Q18-f)

Internship: Students need to go for few weeks to months in various industries and organizations where they get an opportunity to apply their theoretical knowledge in practice. (See Annex C2-Q18-g)

Survey Camps: The field survey camp for maximum of 35 days is conducted to obtain practical knowledge. (See Annex C2-Q18-h)

Pedagogy of Learning: The following table shows how the pedagogy of learning is changing. (See Annex C2-Q18-i)

L&T approaches @ KU

S.N	Year	Approach	Introduced with	Method Adopted
1	1992	Performance Based Learning	Computer Science course in <u>I</u> Sc program	traditional approach – formative and summative assessments
2	1993	Participatory Based Learning	MBA program	combination of presentations, case study & report
3	1994	Project Based Learning	UG Engineering and Science programs	project assigned in the first year. Modules gradually introduced to instill theoretical concepts.
4	2004	Passion Based Learning	MS by Research program	driven by the passion and the dedication of the candidate to find answers to the research problem
5	2007	Profession Based Learning	Geomatic and Civil Engineering programs	graduates were well versed in solving land management and hydropower problems, respectively.
6	2008	Evidence Based Learning	Computer Engineering	Evidence based software engineering in cooperation with Simula Research Lab Norway
7	2010	Community Based Learning	UG Engineering and Science programs	integrate student projects with rural communities through the University's outreach program
8	2011	Digital Based Learning	All programs	e-Learning methods using the Moodle system. In 2016 MOOC was introduced.

b. Communication skills ✓ □ □

E-learning: Students have access to eLearning portal in which all the activities regarding academic aspect is communicated. <http://elf.ku.edu.np/login/index.php>.

Digital Learning Research Lab: The lab is developed to assist teacher and educators in teaching and learning activities and to empowering digital innovation in education by using ICT.

Presentation: Group and individual presentations are part of course completion requirement. Main objective of presentation is to enhance student's communication skill and make them confident to face mass.

Language center: The Confucius Institute at Kathmandu University is a high-level Chinese Language and Culture institution, cooperatively established by Hebei University of Economics and Business and Kathmandu University with the ratification of Office of Chinese Language Council International. It is also the first Confucius Institute in Nepal. (See Annex C2-Q18-j)

Conducting seminars/ workshop: One of the objectives behind encouraging students to organized seminars/ workshop is to enhance their Personal Relation skills. In the process of organizing events students are required to deals with various people like sponsors, potential participant, and resource person. Organizing events helps in developing student's communication and negotiation skill. (See AnnexC2-Q18-c)

Publication: Students through various clubs are actively engaged in publishing various publications. (See Annex C2-Q18-k)

- Geospace: Geomatics Engineering Society
- IT Express: Kathmandu University Computer Club
- Encipher : Society of Electrical and Electronic Engineers
- Tech Brief: Society of Electrical and Electronic Engineers
- Aviyantaa: Association of Mechanical Engineering Students

- Civil Insight: Kathmandu University Civil Engineering Club
- Quimico “Nano to Mega Design”: Kathmandu University Circle of Noble Chemineers

c. Numerical skills ✓ ☐

Separate subject: Calculus, Mathematics is a compulsory subject math 101 (*See Annex: C2-Q16-d*)

Mathematical Software: Students are encouraged to use mathematical software for their course activities.

Numerical Skills : The course on Numerical methods with its practical in Mat-lab is included in the regular curriculum with a course code of MCSC 202 Numerical Methods (*See Annex: C2-Q16-d*)

Geo-statistics: The students of graduate are offered course in which they will use Geostatistical tools (Course code GEOI 517). (*See Annex: C2-Q18-l*)

d. Use of information technology ✓ ☐

Free internet service: Students have access to 24hr free internet service.

Computer lab: Students have access to computer laboratories from 8AM – 4 PM in normal, but they can be provided access 24 hours under their own responsibility. Students can use computers of Library which is a shared facility with SOS from 8 AM in the morning to 8 PM in the evening 7 days a week.

OpenLab: It is a computer lab which provide laboratory space for Graduate Students where students can do their lab works, assignments and research projects after completing their regular classes. The secondary objective of this lab is to facilitate/guide undergraduate students in doing their semester/independent project <https://openlab.ku.edu.np/>

Geospatial Lab: The lab is based on the geospatial technology and geo-information software. It provides the platform to the students to learn and analyze the spatial data <http://geom.ku.edu.np/>

IT Park: MoU with IT park for running academic, research and industries incubation at IT park.

e. Work as a part of a team and independently ✓ ☐

Clubs: Students have formed different clubs, under which various activities are organized through joint effort. There are departmental and inter departmental club (*See Annex C2-Q18-m*)

Inter-Departmental Clubs:

- ☐ AIESEC Kathmandu University
- ☐ Amnesty International Nepal Kathmandu University Youth Network (AIKUYN)
- ☐ Kathmandu University Robotics Club (KURC)
- ☐ Kathmandu University Youth Red Cross Circle (KUYRCC)
- ☐ KU Society of Music and Culture (KUSMC)
- ☐ Rotaract Club of Kathmandu University (RTC-KU)

Departmental Clubs:

- ☐ Association of Mechanical Engineering Students (AMES)
- ☐ Geomatics Engineering Society (GES)
- ☐ Kathmandu University Circle of Noble Chemineers (KUCONC)
- ☐ Kathmandu University Computer Club (KUCC)
- ☐ KU Civil Engineering Club (KUCEC)
- ☐ Society for Electrical and Electronic Engineers (SEEE)
- ☐ Society of Business Information Students (SBIS)

Group discussion: During class hours faculty member organized group discussion.

Group /individual project: Students are assigned both group and individual project as a part of requirement of course.

Festivals/Fare: Students are engaged in conducting festivals and fare. The students club organized well come and farewell program. The various exhibition has been conducted from the student club.

Well come and Farewell Program (*See Annex C2-Q18-n*)
Project Exhibition, Mapathon (*See Annex C2-Q18-o*)

19. Are there any additional focused programs and electives offered by the institution?
Yes ☒ No ☐ If yes, give details.

The various program has been initiated under the School in such a way to meet the current demand of the country. For instance: Master in Land Administration and ME/MS in Geoinformatics is focused for developing land professional in the land management of federalist scenario. Similarly, structural economics and planning and operation, ME/MS sanitation technology are an example. Similarly, various electives are offered to the both graduate and undergraduate students. They have privileged to choose the course of their choice (*See Annex C2-Q19*)

20. Has the institution taken any initiative to contribute/feedback to the curriculum of the university?
Give evidence with the examples of last 4-5 years (1)

Yes, there is provision of conducting workshop for feedback mechanism by inviting various expertises from the industry with a rational to develop a curriculum as per the need of the market. The feedback obtained from the workshop is then presented in the subject committees and revise course content as per need. The revise course content is presented in academic council and with approval of academic council revision is done.

Workshop in graduate program in introduction of new course (*See Annex C2-Q20-a*)
Course content discussion in subject committee (*See Annex C2-Q20-b*)
Changes content revision in subject committee (*See Annex C2-Q20-c*)

21. Is there any mechanism to obtain feedback from academic peers and employers? (1)
Yes ☒ No ☐ If yes, give details.

The school level meetings are conducted on weekly basis. The meeting is chaired by Dean of the School. All the Head of Department are invited to discuss and feedback on the day to day academic activities. Similarly, each department have weekly departmental meeting chaired by concerned HOD. In the meeting, all faculties on the concerned department including administrative staff are invited in which the information from the school meeting are disseminated whereas the agenda to be proposed in the school meetings are discussed.

Besides, the meetings with the members of Subject Committee, Faculty Board, and Academic Council are held as per the requirement in order to endorse various activities. Related academic persons are made members of Subject Committee, Faculty Board, and Academic Council, so that they can provide their views and ideas. During meetings decisions are made by holding healthy discussion among the members.

In addition the employers from the industries are asked to provide feedback which is collected when industry visit university for selection of Interns and when faculties visits industry to monitor internship program. There is a strong representation of Industry in Faculty Board.

- ☐ Sample of Staff meeting minute (*See Annex C2-Q21-a*)
- ☐ Sample of Decision making through subject committees (*See Annex C2-Q20-b*)
- ☐ Research Committee (*See Annex C2-Q21-b*)

22. Give details of institution-industry-neighborhood networks if any? (1)

Yes, There is a strong relation with industry/organization and neighborhood. Some of them are listed below

Dhuikhel Municipality, Panauti Municipality, Banepa
Municipality Nepal Academy of Science and Technology
(NAST)

Nepal Hydro and Electric

People Energy and Environment Development Association
(PEEDA) MinErgy Pvt. Ltd.

Shree Satya Narayan Itta Bhatta Pvt. Ltd.

Kathmandu Alternative Power and Energy Group

(KAPEG) Poverty Alleviation Fund (PAF)

Practical Action

Laser Sun Pvt.

Ltd

Transparency International

IUCN, ICIMOD, UNESCO ,WWF, UNICEF,

WorldBank Websearch Professionals (P.) Ltd

Water & Energy Commission Secretariat

Digital Office Trading Enterprises (DOTE)

Kantipur Publication, Himal Partner, Center for Rural Technology, Nepal

Alternative Energy Promotion Centre (AEPC), Nepal Solar Energy Society

Federation of Nepalese Chambers of Commerce and Industry (FNCCI)

Panchakanya Group , Udayapur Cement Industries Ltd. Nepal ,Janaki Technology. Pvt.

Ltd Nepal Telecommunications Authority (NTA)

Center for Rural Technology, Nepal

Alternative Energy Promotion Centre

(AEPC) Land Management Training Centre

Information Technology Professional Forum (ITPF)

Network for Quality, Productivity and Competitiveness -

Nepal Nepal Micro Plant (P) Ltd

Besides there are provision of formal agreements (MOU) with some organizations. For instance

Ministry of Land Reform and Management: MOU has been signed between Kathmandu University (KU), School of Engineering (SOE) and Ministry of Land Reform and Management (MOLRM), Land Management Training centre (LMTC) for the support of Geomatics Engineering Program of KU at Kathmandu University, Dhulikhel, Kavre.

The MOU between various organization (*See Annex S1-Q27*)

23. Does the institution inculcate civic responsibilities among the students? Give brief explanation in terms of activities (0.5)

Yes, students are involved in various social activities. The students clubs are actively involved for which school motivates and encourages the without hampering their regular academic activities. Students through clubs or departments organize social activities like blood donation program, health camp, community development programs, cleanliness program, and map literacy. Besides, university codes of conducts are guidance to enhance civic responsibilities. The programs related to ethical issues are also organized to incubate social obligation for the student.

The various social activities are incorporated in the annual planning of the club

- o Kathmandu University Civil Engineering Club (KUCEC) o
- Green Club of Thoughts (GCT)
 - o Amnesty International Nepal Kathmandu University Youth Network (AIKUYN)
 - o Society of Electrical and Electronic Engineers
 - o Kathmandu University Youth Red Cross Circle

The yearly calendar containing all the social activities of Kathmandu University Civil Engineering Club (KUCEC) is attached (*See Annex C2-Q23-a*)

24. What are the efforts of the institution towards all-round personality development of the learners? Give brief explanation in terms of activities. (0.5)

School organizes different programs and has adopted practical orientated teaching practices for all round personality development of learner School has facilities of different practical laboratory, so

that students can learn by doing. Besides various lab in KUSOE, the laboratory of KUSOS is also used Multimedia is applied to obtain interactive learning approach. School using different teaching aids to facilitate students in understanding course concept. Projector and white board are placed in each classroom. If faculty needs audio system for showing any video clips it is arrange with support of department assistance. This will help student to increase their personality by increasing their communication.

Various students clubs with approval of student welfare directorate is formed for conducting various activities.

Students through their representatives are involved in major decision making related to students.

Students go for field visit and excursion for enhancing their knowledge.

To enhance students learning habit, a well equip library has been established. Students have access to library 7 days a week except on University declared holidays.

School provides 24hrs free internet service to students.

KU Guidance and counseling cell

(See Annex C2-Q24-a)

25. What are the practices of the institution to impart moral and ethical value based education? Give examples of some practices (0.5)

Code of Conduct for students has been developed by University and was displayed in public space

Student Welfare Council has developed Code of Conduct for students which should be followed by the students while doing the students activities *(See Annex C2-Q25-a)*

Notice and news are published in School/University, Departmental website, to informed all the faculties and students by maintaining transparency *(See Annex C1-Q27-b, C1-Q7-e)*

Students are motivates towards various socially responsible activities like cleaning, plantation, blood donation program, training, social awareness campaigns, and community programs like map literacy *(See Annex C2-Q25-c)*

Faculty and staff members need to follow “Karmachari Sewa Sarta Niyam” of the University *(See Annex C2-Q25-d)*

The content related to Entrepreneurship and Ethics with course code (CIEG 405) is included in the curriculum *(See Annex C2-Q25-e)* There is no cultural of ragging developed in the beginning of the Engineering program at Kathmandu University.

CRITERION 3: TEACHING LEARNING AND EVALUATION (15 MARKS)

26. . Which of the following methods do you apply in admitting the new graduates? Select as many as apply.
(1)

Yes with justification = 0.25, Yes without justification = 0.10 No = 0, otherwise stated

- ☒ through academic records
- ☒ through written entrance tests
- ☐ through group discussions
- ☒ through interviews
- ☐ through combination of above all

The university has separate provision for undergraduate (BE) and graduate (MS and PhD) program

Undergraduate (BE) criteria

Recently university has endorsed the CBT entrance for undergraduate program at School of Engineering. The candidate can apply online through the KU web portal <http://apply.ku.edu.np/cbt>. In order to be fully eligible for admission, candidates must have passed 10+2 level (or equivalent) with a minimum aggregate GPA of 2.4 (50% in percentage scale) and must have appeared in Kathmandu University Common Admission Test. The results of the CBT entrance is posted in KU web page and admission is offered based on merit list.

Graduate MS and PhD program

The admission call for the graduate program MS and PhD is advertized into University web page and National daily news papers. Interested candidates are required to submit an application form along with their past academic certificates. New graduate students are selected through academic records, written entrance test and personal interview. Candidates who meet the minimum requirements and pass entrance exam are called for interview. Name of selected candidate is posted in school webpage as well as in school notice board and admission is offered based on the merit list of the candidates. (*See Annex C3-Q26-a-to-f*)

27. Is there any provision for assessing students' needs and aptitudes for a course? (0.5)

Yes ☒ No ☐ If yes, cite examples.

To access students, need and aptitude for a course following actions are taken:

- **Exam:** Undergraduate students must pass the entrance examination before joining the courses. Written examination consists of course related questions to access whether students have ample understanding to join the courses or not. Students are offered the courses based on the merit list of the entrance examination. However, we have dropped the aptitude test few years back in undergraduate thinking that it is unfair for someone with high score in entrance to reject for admission solely based on the aptitude test. We speculate that there are chances of personal biased. However, for our newly established program Architecture engineering we believe that aptitude test is necessary and planning to implement in near future.
- **Orientation class:** Newly admitted students are oriented at University level, school level and department level. At the University level, Dean, Exam controller, chief of librarian, finance and warden briefed students the basic information in respective field. At the school and department level students are again oriented about the courses to be taken, exam rules and regulation, library access. The basic information like access to library, transportation facility and hostel facilities are provided by the respective departments HODs as well.
- **Continuous in-semester assessment and end semester exam:** Students aptitude for a course is checked throughout the following means:
 - Witten test
 - Quiz
 - Workshop Practice
 - Practical work
 - Project work
 - Viva
 - Open book test
 - Home assignment

(See Annex C3-Q27-a,b,c)

28. Does the institution provide bridge/remedial courses to the academically weak and disadvantaged students? (0.5)

Yes ☐ No ☒ If yes, cite examples (UGC or other supports received in this regard may be indicated).

* Academically weak students are encouraged to visit their concerned faculty for support and consultation. Full time faculty and teaching assistant are there for support of academically weak student.

Furthermore, compartmental and GPA make - up examination provision are there to support the weak students. Furthermore, permanent failed students at different courses are offered the chance exam and assigned separate course instructor to teach and take a chance exam.

Students clubs / organization and faculty members also conduct several training program for the needy students such as C++, R- programming, GIS training, Statistical analysis and research methodology, intellectual property right etc. Many of these programs are in the online portal form <http://old.ku.edu.np/cse/training/data2019/>
(See Annex C3-Q28-a,b,c)

29. Does the institution encourage the teachers to make a teaching-plan? (0.5)

Yes ☒ No ☐ If yes, gives details.

Faculty need to make a teaching plan at the beginning of the semester and submit it to Head Of Department (HOD). It is expected that teaching/course plan is followed except in unavoidable circumstances. Course Plan
(See Annex C3-Q29-a,b).

30. Are syllabi in harmony with the academic/teaching calendar? (0.5)

Yes ☒ No ☐ If yes, give details of implementation in terms of monitoring, coverage, correction, etc

- To ensure syllabi is in harmony with academic calendar, faculty need to prepare teaching plans considering the academic calendar developed by the university. University academic calendar clearly mentions class days and holidays, which helps faculty to develop their teaching plan accordingly.

Academic Calendar (See Annex S1-Q25-a)

Sample teaching plan (See Annex C3-Q29-a,b)

If classes are canceled due to any uncertainly or unavoidable condition, make up classes are scheduled.

The status of course is discussed in department meeting. In very harsh condition it is adjusted by cutting off the existing scheduled vacation plan in academic calendar.

- Correction and changes in syllabi is done as per need. If faculty or department feels that changes in syllabus are needed, the topic is presented before subject committee. Subject committee through discussion make amendment in the syllabus and gets approval from academic council. (See Annex C3-Q30-a)
- At the end of the session faculty need to submit course completion report. This helps to ensure that harmony prevailed between syllabi and academic calendar.

Course completion report (See Annex C3-Q30-b)

Course completion form (See Annex C3-Q30-c)

31. How does the institution supplement the lecture method of teaching with other teaching methods with specific weightage in terms of hours? (directed studies, assignments, presentations) (0.5)

Produce some examples.

- **Internship /Project work / dissertation:** Course curriculum for both undergraduate as well as postgraduate students has been designed so as to involve students in relevant project works/

internship/ dissertation. Project work/ internship / dissertations are taken as a separate credit course ranging from 2 credits – 6 credit depending on departments. A supervisor is appointed to help students during project work, and internship. Many internship opportunities are created for students to visit with in the countries and outside as well. Sample project work /dissertation/ internship guidelines (*See Annex-C3-Q31-a*)

- **Assignment:** The weightage given to assignment varies from faculty to faculty. (*See Annex-C3-Q31-b*)
- **Presentation:** Students are assigned a topic on which they need to present. Presentation can be individual or group depending on course and faculty.
- **Field trip/ Excursion:** To make familiar with real life situation, students are taken for field trip/ excursion.
- **Documentary show:** Course related documentary is shown to students to help them understand subject matter through.
- **Seminars/training:** To provide students with exposure seminars and trainings are being conducted. (*See Annex-C3-Q31-c-to-j*)
- **Project Work:** Mini Project works are incorporated within some relevant course works.
- **Guest Lectures:** Guest lectures are arranged for course works. Guests from prominent industries and academia are invited to enrich students with more relevant knowledge and information.
- **Online resources** Online learning system (www.ku.edu.np, www.ku.edu.np/eng/)

32. Is there a facility to prepare audio visuals and other teaching aids? (0.5)

Yes ☒ No ☐ If yes, give details about the facilities.

To facilitate effective teaching, various teaching aids are available. Each faculty members have their own personal computer. The university has encouraged to use the multimedia for teaching and learning, hence almost each class rooms are equipped with **projector**. If any faculty requires additional teaching aids such as audio and video recording, KU has a separate recording unit equipped with modern devices. Furthermore, a guest lecturer through videoconferencing is also in practice by many departments. Facility for **Audio Video Recording and Editing** is available. Furthermore, Media studio at school of arts provide such facility for audio, video editing and recording. If needed faculties use this facility as well.

Not only for Faculty members but also for KU students and alumni KU has established the Kathmandu University Business Incubation Center (KUBIC) to hunt the best idea coming out from the students and provide fund support to implement such ideas. (*See Annex-C3-Q32-a*)

33. Furnish the following for the last two years (1.5)

Teaching days per semester or per year against the requirement: 193/193, 188/188

Working days per week against the requirement: 6/6, 6/6

Work load per week (for full time teachers): 36/36, 36/36 (includes teaching, research, and service)

Work load per week (for part time teachers): *

Ratio of full-time teachers to part-time teachers: 58/30, 59/30

Ratio of teaching staff to non-teaching staff: 55/15+86*, 59/15+100* (* Central staff)

Percentage of classes taught by full-time faculty: 80%

Number of visiting professors/practitioners: 27, 29

*** Work load per week for part time teachers is not specified, it depends on the course the teacher is teaching. Work load is determined in accordance to the credit course the teachers is teaching which can range from 1 credit to 4 credits. (*See Annex S1-Q16-a*)**

34. a. Are the students oriented to the program, evaluation system, codes of conduct other relevant institutional provisions and requirements? If yes give evidence. (0.5)

University has provided students enough information prior to the start of the classless. Students are oriented at University level and Dean, Controller of examination, chief librarian; Finance and Warden will provide information regarding program details, evaluation system, and hostel accommodation facilities, library facility as well as other rules and regulation. Furthermore, students are also oriented at the department level and are made aware about program, evaluation system, code of conduct, and other relevant details during orientation class.

(See Annex C3-Q28-a,b,c; Annex-C3-Q34-a,b)

b. Are evaluation methods communicated to students at the beginning of the academic session? (0.5)

Yes ☒ No ☐ If yes give evidence.

To ensure transparency evaluation method is published in the university manual and course brochure. (See Annex-C3-Q34-c,d)

35. Does the institution monitor the overall performance of students periodically? (0.5)

Yes ☒ No ☐ If yes, give details

School conducts in-semester and end-semester exam to check students understanding of the course. In addition to exam, assignments, group work, project work, presentation, and case studies are given to students in timely manner.

To monitor overall performance of students, the school follows an evaluation scheme.

Undergraduate students (See Annex-C3-Q35-a)

Post graduate (See Annex-C3-Q35-b)

36. In the case of new appointment of the teaching faculty made by the institution itself, select among the following funding criteria that are evidential in your institution. (1.5)

Vacancy Category	Operational Mechanism					
	Job Advertisement	Selection Committee Formation	Examination by Selection Committee	Evaluation of Demo Classes	Interview by Selection Committee	Job Contract Through Formal Appointment Letter
Self-Funded	√	√	√		√	√
Government Funded						
Any other category: a. b. c.				Not in practice and do not find relevant in changing scenario		

The above mentioned selection procedure is only applicable for full time teaching staff. Selection of teaching staff is done according to policy of the University.

Full time teaching staff

Visiting Faculty

(See Annex C3-Q36-a)

(See Annex C3-Q36-b)

37. Provide the following information (in number) about the teaching staff recruited during the last two years. (0.5)

Teaching staff recruited from ...2074/2075	
2075/2076	
the same district it operates	from other districts

same institution	other institutions	
Year I: -1	Year I: -2	Year I: -7
Year II: -	Year II: -1	Year II: 16

(See Annex-C3-Q37-a)

38. a. Does the institution have the freedom and the resources to appoint and pay temporary/ad hoc teaching staff? Are such provisions define in the institution act/board decision/minute?

Yes ☒ No ☐ If yes, give details of their salary structure and other benefits. (0.5)

Kathmandu University, Teachers and staff service policy has clearly mentioned about appointment of temporary staff, Visiting faculty, and part time staff

Visiting faculties and part time staff are not subject to any additional benefit like full time teaching staff. Contract/temporary staffs are not entitled to allowances and provident fund, they get flat salary.

Salary structure

(See Annex C3-Q36-b)

b. Does the institution have provision and practice for inviting visiting/guest faculty on regular basis?

Yes ☒ No ☐ if yes give details (0.5)

Visiting/guest faculties are invited on a regular basis as per need. (See Annex SI-Q15-c)

39. Number of teaching staff who have attended seminars/conferences/workshops as participant's/resource persons/organizer in the last two years: (1.5)

	Participants	Resource persons	Organizer
Institutional level	13	9	4
National level	99	23	76
International level	158	23	135

International level (See Annex C3-Q39-a,b,c)

40. Does the institution follow the self-appraisal method to evaluate the performance of the faculty in teaching, research and extension program? (0.5)

Yes ☒ No ☐ If yes, how are teachers encouraged to use the feedback? Provide justifications.

Self-appraisal method is used to evaluate the performance of the faculty in teaching, research and extension program. Faculty along with HOD/Dean is involved in performance evaluation.

Bimonthly Progress Report: The form is to be completed **by the faculty** and his/her HOD/Dean before 3rd of every second month starting from Srawan/ July recording work progress in the last two months. The monthly work plan in the annual performance plan must be referred to at the time of completing this form. The HOD/Dean must have informal review before giving comments and making assessment. This system is not made compulsory but in future School has planned to strictly practice this system.

Performance Appraisal Report - Faculty: This form is to be completed **by the faculty**, his/her HOD/Dean, the reviewer and the Human Resource Section annually in the first week of July. The annual performance plan and the bi- monthly progress reports for the closing year must be referred to while completing this form. The performance planning, appraisal and feedback session must take place before or at the time of completing the form. This system is not made compulsory but in future School has planned to strictly practice this system. While filling the forms, faculty will come to know about his/her strengths and weakness.

Result of bi-monthly progress report and performance appraisal report is used for performance planning for next year. **Annual performance planning form** (See Annex SI-Q14-n,o)

All these appraisal forms are available in KU web portal <http://elf.ku.edu.np/forms/>

41. Does the institution follow any other teacher performance appraisal method? (0.5)

Yes ☒ No ☐ If yes, give details of the same and state how the results of the appraisal are used.

Beside bi-monthly progress report and performance appraisal report, teachers performances are regularly evaluate by students. If students don't understand teaching method of any faculty they have right to voice their concern to respective faculty and department. At the end of the course student fill course evaluation form (practice is not compulsory) which highlights performance of the faculty. **(See Annex-C3-Q41-a)**

Recently we have introduced the online feedback forms for students.

Teacher's performance is also discussed and evaluated during department meeting.

42. Does the institution collect student evaluation on institution experience? (0.5)

Yes ☒ No ☐ If yes, what is the significant feedback from students and how has it been used?

It is not compulsory for all students to give evaluation on institution experience, but few interested students evaluation/feedback on institutional experience is collected and placed in college manual, course brochure, and website. Furthermore, university has initiated the feedback collection from the alumni as well.

Feedback/suggestions collected from students are used for future planning by the university. If same suggestion/feedback is given by many students the issue is given priority.

Some faculty members collect course feedback by instructing students to fill course evaluation form. A template for course evaluation form is developed. Although course evaluation system is there, it is not made compulsory. In future school is planning to make it compulsory for every faculty to collect course feedback.

(See Annex C3-Q42-a)

Department of Electrical and Electronics Engineering have developed a booklet of the course Masters of Engineering in Electrical Power Engineering (MEEPE) offered at KUSOE. The booklet provided details about the course starting from its inception to gradual growth, **experiences of graduates**, and the development and spin off effect of the program. **(See Annex C3-Q42-b)**

43. Does the institution conduct refresher courses/seminars/conferences/symposia/ workshops/programs for faculty development?(0.5)

Yes ☒ No ☐ If yes, give details.

School conducts various seminars/conference/symposia/workshop programs for both faculty as well as students. Faculty and students are encouraged to participate in programs organized by the school.

Information about events is posted in school website and interested candidates can join the event. If it is a closed events invitation is sent.

Sample workshops/seminars **(See Annex-C3-Q43-a,b)**

44. Give details faculty development programs and the number of teachers who benefited out of them, during the last two years. (0.5)

Faculty Development Programs	No. of Beneficiaries	
Further education: PhD Masters	10	
International seminars/conference/workshop	158	
Faculty representing in different national level seminars/workshops	99	

Teachers who have attended international seminars/conference/workshops **(See Annex C3-Q39-a,b)**

Faculty members are engaged in organizing/ participating in workshops/seminars.

Sample workshops/seminars (*See Annex C3-Q44-a*)

45. Furnish information about notable innovations in teaching. (0.5)

School believes in all round development of students, for this school has initiated involving students in practical work for beginning of their course. Students are being involved in project works from first semester itself. Project work provides students with a platform to put their theoretical knowledge into practical work.

Students participation in the community education program (CEP) , Malaysia visit for expo and Robotics club organize the demonstration every years are some of the examples of teaching innovation. (*See Annex C3-Q45-a,b*)

46. What are the national and international linkages established for teaching and/or research? (0.5)

School has established linkage with different national and international organization for the purpose of teaching and research. Students are also benefitted from the several mobility program such as Erasmus Mundas, KOICA , JICA and support from the Chinese government as well.

(*See Annex C3-Q46-a*)

CRITERION 4: RESEARCH, CONSULTANCY AND EXTENSION (10 MARKS)

47. Research budget of the institution in % of total operating budget. (1)

35.7% of the total budget of school of engineering is utilized for research for the year 2076 / 77

Ongoing research projects of SoE included in Annual Budget 2076 / 77

SoE Budget	A	:	201,190,000	
Internal Budget (For Research)	B	:	2,350,000	
Externally Funded Budget (Research)	C	:	69,507,618	
Total Research Budget	B + C	:	71,857,618	(35%)

(*See Annex S1-Q3-d*): **Annual Budget**

48. How does the institution promote research? (1)

- Encourage PG students doing project work ✓

PG students doing project work are assigned a supervisor and they are liked with externally funded project as far as possible.

- Teachers are given study leave ✓

A study leave policy is available to encourage teachers to pursue further studies as well as exchange programs abroad.

(*See Annex C2-Q25-d*): **SewaSartaNiyam, Parichhed 5**

- Teachers provided with seed money ✓

Provision of RDC funded internal research

Research fund allocated in each department budget

Externally funded research project

(*See Annex C4-Q48-a*): **RDC Policy**

- Provision of Research Committee ✓

Yes, there is a provision of Research Committee. The committee is chaired by Dean where as Associate Dean, Senior Professors and Head of the departments are members.

(*See Annex C1-Q3 - h*): **Research Committee**

Research Committee for School of Engineering

SN	Name	Role
1	Dr. DamberBahadur Nepali	Chairman
2	Prof. Dr. Hari P Neopane	Member
3	Prof. Dr. BholaThapa	Member
4	Prof. Dr. Ramesh Kumar Maskey	Member
5	Dr. Prachand Man Pradhan	Member
6	Dr. Daniel Tuladhar	Member
7	Dr. Bal Krishna Bal	Member
8	Dr. Rajendra P Joshi	Member
9	Dr. Shailendra K Jha	Member
10	Dr. GyanendraLal Shrestha	Member
11	Dr. SubashGhimire	Invitee

- Adjustment in teaching load/schedule ✓

Adjustment in teaching load/schedule is done for teachers who are engaged in research or further studies. (Normally Prof/Asso. 30%, Asst 20% Lect. 10%), but department can make necessary adjustment as per need.

(See Annex S1-Q16-a): Workload Standards & Criteria for Faculty Members

49. Is the institution engaged in PhD level programs? (1)

Yes ☒ No ☐ If yes, give details

PhD is offered in all the department as well as there are inter school PhDs.

Currently 13 PhDs are enrolled and 10 PhDs has been already graduated from the school.

List of graduated PhDs are provided in question no 55.

(See Annex C4-Q51-a): List of enrolled students

Cottutelle with NTNU for PhD

It is a condition that the doctoral degree candidate satisfies the admission requirement at both Kathmandu University and Faculty of Engineering Science and Technology at NTNU, Norway and will be admitted to an approved doctoral degree programme at both institutions. PhD degree is also awarded by both the university. Dr. Sailesh Chitrakar completed his PhD under this scheme in the year 2018.

Some PhDs are inbuilt in several externally funded program

Some PhDs are inbuilt in several externally funded program: For Instance Dr. Reshma Shrestha have completed her PhD in 2019 under the framework of MOU between Kathmandu University and University of Twente by seeking external funding.

(See Annex C4-Q49-a): Education Information System (EIS) Report

(See Annex C4-Q49-b): Cottutelle with NTNU

50. What percentage of teachers is engaged in active research - guiding research scholars, operating projects, publishing regularly, etc.? Give details. (0.5)

All teachers are expected to be engaged in teaching, research, and service activity as per the norms. Details are also mentioned in the Section 1 question 16.

Activities / Position	Professor & Associate Professor	Assistant Professor	Lecturers and other (TA)
Teaching	50%	70%	80%
Research	30%	20%	10%
Service	20%	10%	10%

(See Annex S1-Q16-a): Workload Standards & Criteria for Faculty Members

51. Mention the admission status of the MPhil/PhD graduates in your institution. (0.5)

Level	Enrollment Status	Total
-------	-------------------	-------

	Full Time	Part Time	
MPhil / MS by Research*	13		13
PhD	1	12##	13

*MS by Research is a research based degree with minimum course work.

Almost all PhD are funded by some agencies or candidates are in service

(See Annex C4-Q49-a): Education Information System (EIS) Report

(See Annex C4-Q51-a): List of enrolled students

52. How many PhDs have been awarded during the last five years? (1)

8 PhD in last 5 years

(See Annex C4-Q49-a): Education Information System (EIS) Report

List of awarded PhDs

S. No.	Name of Student	Graduation Year	Thesis Title	Dept.	Supervisor
1	Dr. Laxman Poudel	2013	<i>Study on Sediment Characterization and its Impact on Hydrulic Turbine Material</i>	<i>Mechanical</i>	Prof. Dr. Bhola Thapa
2	Dr. Prachanda Man Pradhan	2014	<i>Composite Action of Partial infill wall in Reinforced concrete Frame under Lateral Load</i>	<i>Civil Engineering</i>	Prof. Dr. Ramesh Kumar Maskey/ Dr. Prajwal Lal Pradhan
3	Dr. Bal Krishna Bal	2015	Analyzing Opinions and Arguments in News Editorials and Opinionated Texts	<i>Computer</i>	Prof Pat Hall/
4	Dr. Krishna Prasad Shrestha	2017	<i>Design of Francis Turbine for the large Sediment Load</i>	<i>Mechanical</i>	Prof. Dr. Bhola Thapa/ Dr. Ole Gunnar Dahlhaug
5	Dr. Pranita Upadhyaya	207	An Emperical Study of E-Government Security Implementation in Developing countries: a case study of Nepal	Computer Science & Engineering	Manish Pokharel/ Dr. Subarna Shakya
6	Dr. Sailesh Chitrakar	2018	<i>Secondary Flow and Sediment Erosion in Francis Turbine</i>	<i>Mechanical</i>	Dr. Ole Gunnar Dahlhaug/ Dr. Hari Prasad Neopane
7	Dr. Sailendra Kurnjha	2018	Interconnection and Control of Multiple Microgrids	Electrical and Electronics Engineering	Prof. Dr. Uhlen Kjetil, Prof. Dr. Petter Stoa
8	Dr. Shyam Sundra Khatka	2019	<i>Tunnel Closure Analysis of Hydropower Tunnels in Lesser Himalayan Region of Nepal through Case Studies</i>	<i>Civil Engineering</i>	Prof. Ramesh Kumar Maskey/ Dr. Seokwon Jeon
9	Dr. Subash Ghimire	2019	Developing Land Valuation Model for Land Acquisition in Infrastructure Development: A Livelihood Perspective	<i>Geomatics Engineering</i>	Prof. Dr. Sagar Raj Sharma and Dr. Monica Lengoiboni
10	Dr. Surendra Lal Hada	2019	Design and Optimization of Medel Splitter for Multimode Communication System	Electrical & Electronics Engineering	Prof. Dr. Bhupendra Bimal Chettri/ Prof Ajjirahaman

53. Does the institution provide financial support to research students? (0.5)

Yes ☒ No ☐ If yes, give % of financial support from recurring cost.

Yes, institution provides financial support for research students (PhD, MS by Research)

Different supports are provided to research students like KU Faculty development, external funded projects, UGC support etc.

(See Annex C4-Q48-a): RDC Policy

54. Provide details of the ongoing research projects: (0.5)

Total number of projects	Project Revenues (in NRs.)
--------------------------	----------------------------

28

526,980,594.83

Details are provided in the question 55.

(See Annex S1-Q3-d): Annual Budget Annex 2

(See Annex C4-Q54-b): List provided by RDC

(based on the information received form finance officer in email dated 11 Feb, 2020 Tuesday)

55. Give details of ongoing research projects funded by external agencies. (0.5)

Funding agency	Amount (Rs.)	Duration (Years)	Collaboration, if any
UGC	120,000.00	NA	NA
Post Gre	987,000.00	NA	NA
Energize-Nepal	4,795,000.00	01.12.2017 to 30.11.2020	NA
IRDP	5,987,288.14	01.10.2019 to 30.05.2020	NA
KOICA	20,000,000.00	NA	NA
World Bank	7,490,000.00	NA	NA
University of Washington	4,224,000.00	NA	NA
Energize-Nepal	11,227,750.00	01.12.2018 to 30.11.2020	NA
CE Construction Pvt. Ltd.	1,056,750.00	06.11.2018 to 06.11.220	NA
UGC	160,000.00	NA	NA
NFA through Energize Nepal	7,305,737.00	14.11.2018 to 13.11.2021	NA
City, University of London, GCRF	739,900.00	17.09.2019 to 17.03.2020	NA
Energize-Nepal	1,849,866.00	Nov.2018 to Dec.2021	NA
ERASMUS + Grant	8,150,377.50	Oct.2018 to Oct. 2021	NA
Energize-Nepal	13,075,928.00	NA	NA
UGC	2,000,000.00		
IRDP	2,967,833.34	1Year	NA
ERASMUS + Grant	5,700,142.94	15.10.2017 to 14.10.2020	NA
UGC	105,000.00	NA	NA
University Of Bristol	1,523,277.45	01.05.2017 till 30.04.2020	NA
IRDP	3,721,094.60	06.02.2019 to 06.30.2020	D Lab, MIT, USA
UGC	80,000.00	NA	NA
Energize-Nepal	7,200,000.00	01.12.2018 to 30.11.2021	NA
UGC	160,000.00	NA	NA
UGC	80,000.00	NA	NA

Energize-Nepal	7,245,000.00	01.12.2018 to 30.11.2020	SWAT, Kingdom Bioenergy, University South Eastern Norway
NEA ENGINEERING Company Ltd.	587,938.00	2075/07/20 to 2075/09/20	
RENE & Others	440,330,000.00	16.07.2016 to 31.12.2021	Hydro Lab Pvt. & Norwegian University of Science and Technology (NTNU)

(based on the information received from finance officer in email dated 11 Feb, 2020 Tuesday)

(See Annex S1-Q3-d): Annual Budget

(See Annex C4-Q54-b): List provided by RDC

(See Annex C4-Q55-a): Document provided by TTL

56. Does the institution have research/academic publication? If yes, give details of publications in the last two years. (0.5)

KUSET is published twice a year but from last 2 years no new issue have been published.

Best papers from CRHT are forwarded to IoP conference series of Journal of Physics. All the selection and review of papers are conducted in KU. IoP had better impact than KUSET and Hence authors prefer IoP.

(See Annex C4-Q56-a) : Publication of papers from CRHT in IOP

List of publication by faculties of SoE

Title	Author	Department
Study on the Effect of Mass and Stiffness Irregularities on Fundamental Period of Infilled RC Framed Buildings.	Dr. Prachand Man Pradhan	Civil Engineering
“Behaviour of Stone Masonry Buildings at Ramechhap District During 2015 Gorkha Earthquake: A Case Study	Dr. Prachand Man Pradhan , Mr. Mahesh Raj Bhatt	
International Conference on Recent trends in Construction Materials and Structures (ICON2019) [Keynote Speaker]	Dr. Prachand Man Pradhan	
“Coordinate transformation parameters in Nepal by using neural network and SVD methods	Dr. Prachand Man Pradhan, Kutubuddin Ansari, Prabin Gyawali, Kwan-Dong Park	
Load Bearing Capacity of Lateral Loaded Piles in Watered Carpathian Flysch	Dr. Prachand Man Pradhan	
Experimental Work For Mechanical Properties of Brick And Masonry Panel	Dr. Prachand Man Pradhan, Saroj Phaiju	
Determination of Shear Strength of Bamboo Panel	Dr. Prachand Man Pradhan, Shiva Prasad Timalsina, Mahesh Raj Bhatt	
Earth and Bamboo: Experience from Nepal	Dr. Prachand Man Pradhan, Nirpal Adhikari	

Research-based education for industrial development: Experiences of Kathmandu University in turbine technology	Dr. Bhola Thapa	Mechanical Engineering
Application of Reduced Graphene Oxide (rGO) for Stability of Perovskite Solar Cells.	Dr. Bhim P. Kafle	Department of Chemical Science & Engineering
Development of a test rig for investigating the flow field around guide vanes of Francis turbines	Dr. Sailesh Chitrakar, Prof. Hari Prasad Neopane and Prof. Ole Gunnar Dahlhaug	Department of Mechanical Engineering
Current Research in Hydropower Technologies (CRHT)	Selected papers are published in Journal of Physics conference series	
Study of Adiabatic Obstacles on Natural Convection in a Square Cavity Using Lattice Boltzmann Method	Pawan Karki, Ajay Kumar Yadav, D. Arumuga Perumal	Mechanical Engineering
An Empirical Assessment of Service Quality and Customer Preference of Cellular Service Providers in Nepal	Dr. Gajendra Sharma and Ghanshyam Mahaseth	Computer Science and Engineering
Distributed Multimedia System for Distance Education.	Dr. Gajendra Sharma	
Use of Virtual Machine for Distributed Computing in Sensor Grids.	Dr. Gajendra Sharma and Sapan Aryal	
Implementing e-Learning in Far Western Region of Nepal. Review of Knowledge Economy	Dr. Gajendra Sharma and Mahesh Prasad Bhatta	
Adaptive Wireless Sensor Network and Internet of Things.	Dr. Gajendra Sharma and B. K. Bhattarai	
Fault Tolerance in Real Time Distributed System. Trends in Technical & Scientific Research.	Dr. Gajendra Sharma and Ankita Yadav	
Intelligent Class Scheduler in Kathmandu University.	Dr. Gajendra Sharma and Rabin Shrestha	
Comparison of Routing Protocols in-terms of Packet Transfer Having IPV6 Address Using Packet Tracer	Dr. Gajendra Sharma and Binay Sharma	
Contribution of FranSed Project to the research at Turbine Testing Laboratory at Kathmandu University in Nepal	Dr. Biraj Singh Thapa	Department of Mechanical Engineering
“Action Space” Based Urban Land Governance Pattern: Implication in Managing Informal Settlements from the	Dr. Reshma Shrestha, Dr. Jaap Zevenbergen, Dr.	Department of Geomatics Engineering

Perspective of Low-Income Housing. Sustainability, 10(7), 2202. DOI: 10.3390/su10072202	FahriaMasum and Dr. Mahesh Banskota	
Urban Land Governance: “Action Space”, Legitimacy of and Intervention Strategies for Urban Informal Settlements in Nepal. Nordic Journal of Surveying and Real Estate Research, 11(2), 20-50.	Dr.ReshmaShrestha, Dr. Jaap Zevenbergen, Dr. ArbindTuladharand Dr. MaheshBanskota	
Exploring the Potential of the Land Readjustment Approach in Allocating Land for Affordable Housing from the Market Legitimacy Perspective. In: Responsible Land Governance: Towards and Evidence Based Approach, Washington, D.C.	Dr.Reshma Shrestha, Dr. JaapZevenbergen, Dr. FahriaMasum and Dr. Mahesh Banskota	
Developing Assessment Framework For Assessing Good Governance in Land Valuation. International Journal of Advanced Research and Review (IJARR)	Dr. SubashGhimire, Dr. ArbindTuladhar, Dr. Sagar Sharma,	
Governance in Land Acquisition and Compensation for Infrastructure Development American Journal of Civil Engineering	Dr. SubashGhimire, Dr. ArbindTuladhar, Dr. Sagar Sharma	

Publications related to TTL are also listed in TTL Anniverssary issues.

(See Annex C4–Q55–a): Document provided by TTL

57. Does the institution offer consultancy services? (0.5)

Yes ☒ No ☐ If yes, give details.

Faculty members are encouraged to provided consultancy services by University. Consultancy services can be of University level or Individual level.

Some of the example of consulting service:

- i. Engineering Design Services of Hydraulic Steel Structures for Mai Beni Hydropower Project (9.51MW)
Funding agency: CE Construction Pvt. Ltd.
Project Duration: 2 years (2018 – 2020)
Partner Agency: TTL
(See Annex C4–Q55–a): Eight Anniversary Issue 2019 by Turbine Testing Laboratory
- ii. DoCSE provided consultancy services for Research and Development of the following three Projects to Nepal Association of Blind, Kathmandu:

- a. Nepali OCR Project (Desktop-based) - 2016-2017
- b. Nepali TTS Project - 2017-2018
- c. Nepali OCR Project (Android mobile based) - 2017-2018.

iii. Survey and Mapping of Powerhouse and Access Road of Jagdulla Storage Hydroelectric Project

- a. Starting Date: 15 May
- b. Ending Date: 23 July
- c. Funded By: Nepal Electricity Authority Engineering Company (NEAEC)

By Department of Geomatics Engineering

(See Annex C4-Q57-a): Report of JSHP

iv. Inspection of transmission line infrastructure for Bhaktapur-Baneshwor-Patan-66 kV Transmission Line Upgradation Project

Starting Date: 5 Nov

Ending Date: 20 March

Funded By: Nepal Electricity Authority Engineering Company (NEAEC)

By Department of Geomatics Engineering

(See Annex C4-Q57-b): Report of Transmission Line

Details of Consulting Service Policy and Guidelines can be found in **(See Annex C4-Q48-b): RDC Policy**

58. Does the institution have a designated person for extension activities? (0.5)

Yes ☒ No ☐ If yes, indicate the nature of the post as –

Full-time ☒ Part-time ☐ Additional charge ☐

An individual department appoints faculties / staff for extension activities as per requirement which is decided by the department and is mentioned in the minute of the department. For example each department has Internship coordinator as following:

SN	Department	Internship Coordinator
1	Department of Electrical and Electronics	Mr. Brajesh Mishra
2	Department of Mechanical Engineering	Mr. Pratisthit Lal Shrestha
3	Department of Geomatics Engineering	Dr. Reshma Shrestha
4	Department of Civil Engineering	Mr. Ramesh Adhikari
5	Department of Computer Science and Engineering	Mr. Satyendra Lohani
6	Department of Chemical Science and Engineering	Dr. Bibek Upreti

59. Indicate the extension activities of the institution and its details: (0.5)

Community development ☒ Training in Disaster Management ☒ Health & hygiene awareness ☒

Medical camps ☐ Adult education and literacy ☐ Blood donation camps ☒

AIDS awareness ☐ Environment awareness ☒ Any other ☒

Engineering without border ☒

Amnesty International ☒

Vehicle Pollution Monitoring ☒

Safety week ☒

(See Annex C4-Q59-a): Community Education Program Report

(See Annex C4-Q59-b): Earthquake Report

60. Are there any outreach programs carried out by the institution (for example, Population Education Club, Adult Education, National Literacy Mission, etc.)? (0.5)

Yes ☒ No ☐ If yes, justify.

School through its students clubs organizes public awareness programs on issues related to drugs/smoking, health issues, environment issues, and issue based campaigns.

Technical Training Centre (TTC) had conducted trainings

Safety week was conducted in collaboration with Institute of Automotive Engineers

(See Annex C4–Q60–a): TTC training Document

Activities of student clubs can also be found in their magazines

(See Annex C2–Q18–k): Annual Magazine published by different programs

61. How are students and teachers encouraged to participate in extension activities? Any defined approaches? (0.5)

Yes, teachers and students are encouraged to participate in extension activities through students clubs, visits, participation in technical competitions organized inside and outside school and are funded by school through department. One of the examples is Community Education Program (CEP) as discussed in question number 59.

(See Annex C4–Q59–a): Community Education Program Report

In 2019, a team of ten members (9 students and 1 faculty) from Kathmandu University participated in Shell Eco Marathon (Asia) held in Malaysia. They had designed and fabricated a fuel efficient car named Junkiri which was probably first time from Nepal and second from South Asia (after India) to participate in such event. Most of the cost was covered by the School of Engineering through Department of Mechanical Engineering and some sponsors.

(See Annex C4–Q61–a): Junkiri blog

62. Does the institution work and plan the extension activities along with NGO's and GO's? Give details of last 3 years. (0.5)

Different departments have conducted extension activities in collaboration with following organizations:

Rangjung Yeshe Institute (RYI)

Tribhuvan University

Pokhara University

National Academy of Medical Sciences (NAMS)

IUCN

ICIMOD

UNESCO

WWF

Shimadzu (Asia Pacific) P. Ltd. Singapore, and Pacific Commercial Company (P) Ltd. (PCC), Nepal

UNICEF

Mercantile Communications

Chaudhari Education Foundation

Websearch Professionals (P.) Ltd.

Digital Office Trading Enterprises (DOTE)

Kantipur Publication

Himal Partner

Center for Rural Technology, Nepal

Nepal Pharmaceuticals Lab (P.) Ltd.

Information Technology Professional Forum (ITPF)

Alternative Technology Pvt. Ltd. Nepal

Image Channel Pvt. Ltd.

Hydro Lab (P.) Ltd.

Nepal Dairy Institute of Technology and Management

Nepal Solar Energy Society

Network for Quality, Productivity and Competitiveness - Nepal

Nepal Micro Plant (P.) Ltd.

Federation of Nepalese Chambers of Commerce and Industry (FNCCI)

Chure-Tarai Conservation Development Board

<p> Panchakanya Group Janaki Technology. Pvt. Ltd. Ministry of Federal Affairs and Local Development Nepal Engineering Association Business Center (NEABC) Help Nepal Network (HeNN) Institute of Automotive Engineers (IAE) Nepal Telecommunications Authority (NTA) Water and Energy Commission Secretariat Dhulikhel Municipality Panauti Municipality Udayapur Cement Industries Ltd. Nepal Nepal Telecommunications Authority (NTA) Land Management Training Centre Alternative Energy Promotion Centre (AEPC) <i>(See Annex S1-Q27-a) : List of MoU</i> </p>
<p>CRITERION 5: INFRASTRUCTURE AND LEARNING RESOURCES (20 MARKS)</p> <p><u>A. General Physical Infrastructure</u></p> <p>63. Does the institution have a comprehensive master plan indicating the existing buildings and the projected expansion in the future? (0.5)</p> <p>Yes. The university has a comprehensive master plan. Many buildings and infrastructures are completed and some are in the process of completion and construction. The master plan is published by the university as book authored by founding Registrar Dr. SitaramAdhikary and CED Team. The book contains detail drawings of the infrastructures. <i>(See Annex C5-Q63-a)</i></p> <p>64.a. How does the institution plan to meet the need for augmenting the infrastructure to keep pace with academic growth? Produce plan, if any. (0.5)</p> <p>During the establishment of the university, the university envisioned the potential growth in the academic sector, for that matter, the infrastructure of the university is growing. Land has been purchased for accommodating new buildings for academic programs such as Architecture, Civil Engineering, and Geomatics Engineering. The university is regularly adding more land and buildings. The architecture program is running in the newly build facility on the land purchased recently (13 Ropanis). Furthermore, Geomatics Engineering program is supported by Government of Nepal to build buildings. <i>[(See Annex C5-Q63- a (Master plan); Annex S1-Q9-a (Lalpurja for newly bought land))]</i></p> <p>b. What support facilities are available for conducting the education programmers in the institution?(0.5)</p> <p>Laboratory: School have different laboratory addressing the need of courses offered. At present there are 42 different laboratories operating under School of SOE. In addition to these laboratories as per need SOE also shares laboratories of SOS. <i>(See Annex C5-Q64-a, b, c)</i></p> <p>Policy guidelines have been developed for establishing centres and specialised laboratories. <i>(See Annex C5-Q64-b, c)</i></p> <p>Library: The Central Library is located in the central campus and shared by SOE, SOS and students of DoMIC. The library is open for access to students and faculties seven days a week with exception on University declared holidays <i>(See Annex C5-Q64-d).</i></p> <p>Others</p>

Auditorium: Auditorium is a shared recourse between SOE, SOS, and Central office of KU. Auditorium is used for organizing seminar, conferences and other academic related programs. Main auditorium can accommodate 351 people and Mini auditorium can accommodate 76 people. With permission of KU management Auditorium is also used by external agencies/organizations. *(See Annex C5–Q64-e)*

West Wing Hall: The university has a hall at the western part of the university premise. It is used by students for having various talk programs, cultural programs and musical events. It can be used by prior booking of the hall from KU management. *(See Annex C5–Q63-a)*

Multipurpose Hall: The multipurpose hall has a capacity of accommodating about 2000 people is under construction and in the verge of completion very soon. It has a total built up area of 2744.33 m². It can be used for organizing seminar, conferences and other academia related programs. *(See Annex C5–Q64-f)*

Generator and UPS: To ensure classes are not interrupted due to electricity problem, School has facility of Generator and UPS. The backup power is provided by 200 kVA generator.

Solar Backup: The total number is 334 to generate 50 kilowatts of power. The system has 700 AMP/Hr battery. The total number of batteries is 180. The inverter is of 60 KVA manufactured by LEONICS. *(See Annex C5–Q64-g)*

65. Does the institution have provision for regular maintenance of its infrastructure? Provide scheme. (0.5)
SOE believes in having all the equipment and infrastructures in good operating conditions. If any problems arise, the school has a dedicated unit called Physical Facility Department, for all the maintenance activities. The person need to fill up a maintenance form and submit it to Physical Facility Department and it addresses the problems as soon as possible. **Maintenance form** *(See Annex C5–Q65-a, b, c)*

66. How does the institution ensure optimum utilization of its infrastructure facilities? Produce the plan. (0.5)

School uses its infrastructure facilities at it optimum capacity. Many facilities like library, laboratories, auditorium, seminars halls, sports grounds, and canteen are shared by SOE and SOS. Students/faculty/ staffs can enjoy library facility 12hrs a day 7 days a week excluding during university declared holidays. Students/faculty/staff have free access to different laboratories, if someone needs to use laboratory facility during off time, permission is needed. Some of the shared facilities like CV Raman Auditorium and International Guest House, Canteens are also used by external agencies. The facilities such as CV Raman Auditorium and Canteen is frequently used for conducting National and International Seminar and Conferences. *(See Annex C5–Q64-e,f)*

Classroom occupancy is also optimum. BBIS and Computer Science Classes are run during the morning hours and computer labs, Drawing labs are run efficiently for all engineering programs. GE Diploma Classes which is a program of LMTC, uses classroom in the university when those classes remains idle. *(See Annex C5–Q67-a)*

TTC facility is used by Banepa Polytechnic Institute (CTEVT) .*(See Annex C5–Q67-b)*

67. Does the institution encourage use of the academic facilities by external agencies? (0.5)

Yes ☒ No ☐ If yes, give clearly defined regulations.

- **SOE conducts classes** for Geomatics Engineering Diploma Program, which is a program of Land Management and Training Centre. *(See Annex C5–Q67-a)*
- **Technical Training Centre** is used for Skilled Training Program by CTEVT besides carrying out laboratory works of regular academic program.

(See Annex C5–Q67-b)

- **CV Raman Auditorium Hall:** External agencies can rent CV Auditorium Hall, for organizing events. CV Raman Auditorium is a facility shared by SOE, SOS, and Central Office. For renting the hall external agencies needs to fill up a form and get permission from the university. (*See Annex C5 –Q64-e*)
- **Kathmandu University International Center (KUIC):** KUIC is established to provide accommodation for guests of KU. It is a facility which is also used by SOE. The center has also spaces for workshops, seminars and meetings and conferences. KUIC is available for booking by credible organizations at a very competitive price. (*See Annex C5–Q67- c*).
- **Library:** Academic scholars are encouraged to use Central library facilities, but external agencies are not allowed to borrow resources without permission. (*See Annex C5–Q64–d*)

68. What efforts are made to keep the institution clean, green and pollution free? Give details (0.5)

- 36 staffs are hired to maintain college environment and infrastructure. The staffs are responsible for cleaning and maintaining facilities of KUSOE, KUSOS, and central building. Additional 3 staffs are assigned to maintain the garden in a regular basis. (*See Annex C5–Q65–a, b, c*)
- Dustbins are placed in different places, so that people don't throw litters.
- The university organizes tree plantation programs on a regular basis.
- Students and student clubs participate in various cleanliness programs in and outside the university as a part of community services.
- University area is declared as horn free zone, to control sound pollution, boards are kept to make people aware.
- Students clubs and faculties are involved in maintaining college environment.
- Municipality collects garbage from the university on a regular basis.

69. Are there computer facilities in the institution that is easily accessible to students and faculty? (0.5)

Yes, there is sufficient computer facilities in the institution that is easily accessible to students and faculty.

Number of computer accessible to the students ☐ 260

Computer accessible to the faculty ☐ 103

Internet accessible to the students ☐ 260

Internet accessible to the faculty ☐ 103

A separate computer is given to all faculty members.

University has policy of discarding computers and replacing it with new one after 5 years from the purchase date.

70. Give the working hours of the computer center and its access on holidays and off hours. (0.5)

Computers labs are opened from 8:00 AM in the morning to 7:00 PM in the evening, 7 days a week, except on the university declared holidays.

Computer Science and BBIS program starts from 7 AM.

If the students and faculties wish/require, the computer labs can be provided throughout the week 24 hours for students and faculties.

71. a. How many departments have computers of their own? Give details. (0.5)

All department of SOE have computer of their own.

Department of Chemical Science and Engineering	31
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Department of Civil Engineering	20
Department of Computer Science and Engineering	121
Department of Electrical and Electronics Engineering	60
Department of Geomatics Engineering	39
Department of Mechanical Engineering	92
	Total = 363

b. Does the institution have provisions of internet/intercom/CC TV/other facilities Give details (0.5)

Yes school has facility of internet/intercom/CC TV.

- **Internet:** 24 hrs free internet service within school premises is provided including Wi Fi in through university premise. There is 24 hours internet facility within the hostel. Internet service is managed and maintained by ISMS. Internet is provided by fiber optics link from WorldLink Communications P. Ltd., Jawalakhel, Lalitpur, Nepal. Internet bandwidth is 100 Mbps synchronous. Bandwidth is utilized for 24 hours. (See Annex C5–Q73–a)
- **Supercomputers:** Kathmandu University installed the first supercomputer in the country which consists of high performance computing (HPC) servers. Supercomputer has 184 CPU servers, 16 disk servers and 12 network switches, with a total processor count of over 2,500 and 8 TB of memory. (See Annex C5–Q71–a)
- **Intercom:** University has provided intercom communication services in all departments and administration. It is operated under Alcatel Network. More than 230 nodes are present at the central campus.
- **CCTV:** CCTV is placed in computer laboratory, GIS laboratory, library, CV auditorium hall, and main administrative building, Yamaji Block, SOE Administrative Building, Inge Johansen Block and other open areas of the university premise to facilitate the security system in the university. There are more than 10 CCTV cameras.
- **Separate room, educational material recording and editing studio for e-learning**

72. Explain the output of the center in developing computer aided learning packages in various subjects during the last three years? (0.5)

SOE has an online learning forum (eLearning). It is managed and maintained by ISMS. The contents are prepared by respective teachers. The forum has features to upload lectures, reference materials, links, and assignments. Students can access any time at their convenience and have their assignments submitted. Teachers can evaluate and grade the assignments and share it via eLearning forum. (See Annex C5–Q73–a)

73. Is there any provision for maintaining/updating the computer facilities? Provide the details of the system. (0.5)

Yes, Information System Management System (ISMS) team, is responsible for maintaining/updating the computer facilities.

Details of the system:

1. **Internet Connection:** Through Fiber optics link from **WorldLink Communications P. Ltd.**, Jawalakhel, Lalitpur, Nepal
2. **Intranet Connection:** Nepal Research & Education Network (NREN) and its member/s (45 mbps connection with Educational Network)

3. Internet Bandwidth: 100 mbps Synchronous
4. **Bandwidth utilization:** 24 hours
5. **Media and Devices:**
Manageable Routers: 6, Manageable Switches: 60, Firewall: 1, Physical Servers: 30 LAN:
10/100/1000 Mbps

Medium/ Cable: Fiber/ Ethernet (Cat5e /Cat 6)

Wireless AP & LAN Router: Cisco AP, Cambium AP (Outdoor, Indoor), Ubiquiti (NanoStation M2, M5), TPlink, Dlink, Buffalo & SMC
6. Fiber connection in KU:

Building to Building in its premises, KUSMS and School of Law
7. **Topologies:** Star & Extended Star
8. **Number of computers connected to Network:** 1400+
9. **Average number of internet users per day:** 1800+
10. **Intranet bandwidth:** 1 Gbps& 100Mbps

For further details on ISMS, Servers, Human resources (*See Annex C5–Q73-a*)

School has a policy of using computer for a life span of 5 years, after 5 years old computers are discarded and replaced with new one.

74. Does the institution make use of the services of inter-university facilities? (0.5)

School uses Library services of other universities as well. Students participate in different events organized by students of other university. There are inter-university understanding for conducting classes. For example, Some courses of Rock Mechanics under Civil Engineering was taken in IOE, TU. EEBT program has agreement with IOE, TU to take courses of various subjects in IOE. Furthermore, the Geomatics Engineering students use facilities of LMTC, which is the facility outside of the university. The facility is used under the MOU between LMTC and KU.
(*See Annex C5–Q67-a*)

75. What are the various health services available to the students, teacher and other staff? Give details. (0.5)

Kathmandu University has introduced health insurance scheme in collaboration with Kathmandu University Teaching Hospital (Dhulikhel Hospital). It is applicable for both employees and students of the university.
(*See Annex C5–Q75-a*)

In addition to Insurance Scheme first aid kits are available in all departments and in main administrative building. There is a Health Centre in the Pharmacy Block of Central Campus. Furthermore, the university has

a dedicated Counseling Cell in Block number 10. It has benefitted total of 113 students including 51 Girls and 52 Boys. (*See Annex C5–Q75-b, c, d*)

76. What are the physical and infrastructural facilities available in the sports and physical education centre? Give details. (0.5)

Sports and physical education center facilities are shared by SOE and SOS.

KU is constantly pushing itself to create new sport facilities and infrastructure and improving the existing one. Presently, the university provides outdoor and indoor sports facilities within its premise.

- Outdoors: International standard Basketball court, International Standard Football Ground, Cricket Ground, Volleyball Court, Racetrack
- Indoors: Badminton, Table Tennis, Chess, Carrom Board are housed within Social hall. Some TT boards are place around the campus premise.

To encourage students to be physically fit, gym facility is available within the central campus premise. The gym hall is fully equipped with latest equipment.

There is an international standard swimming pool facility within the central campus. There are two swimming pools: Main and Baby Swimming pools. Main Swimming pool is 30 m long and 18 meter wide with depth ranging from 0.9 m to 2.7 m. It has 5 lanes of 1.8 m wide. The capacity of swimming pool is 1400 cubic meters. Students and Staff can use the swimming pool facility. The swimming pool is regularly cleaned and maintained in good condition. A dedicated life guard to make the swimming pool safe for its users is appointed. (*See Annex C5–Q76-a*)

University organizes Annual Sports Event in which students from all schools of the university participate. It is a weeklong event held in the central campus.

77. What are the incentives given to outstanding sports persons? (0.5)

Special concession in attendance for participating events. The university also provides financial supports and technical coaching to the participating students.

78. Give details of the student participation during the last year at the university, regional, national and international meets. (0.5)

	Participation of Students	Outcomes
National	Prime Minister Cup 2075, Organized by National University Sports Association, Volleyball Tournament	Semifinalist
	Inter technical Mini Olympic Volley Ball tournament 2018, Organized by Maharajung Campus , Tribhuvan University	Winner
International	13th UITM International Sports Fiesta-2018 Malaysia (Table Tennis) (<i>See Annex C5–Q78-b</i>)	Winner
	Cultural Exchange Program, Help University Malaysia , 2018	Participant
	Shell Eco Marathon Asia 2019 (<i>See Annex C5–Q78-c</i>)	Participant

(For more list *See Annex C5–Q78-a*)

79. Give details of the hostel facilities available in the institution? (0.5)

KU has 4 hostels (for national students) in the main premises where the School of Engineering is situated. KU has one International Hostel with capacity of 15 students.

Priorities are given to the students from outside the locality. Each hostel is secured by a guard and is provided with hot water (Solar), pantry, canteen, exercising machine, television and sports ground. All rooms are well furnished.

The hostel facility is shared by students of SOE and SOS. Furniture in each room is provided by university and only bedding has to be brought by the students. Hostels have 24 hrs electricity and free internet facility. Students can also enjoy the benefit of hot and cold water. Students in hostel can access all the sports and gym facilities in the university.

Summary of occupancy in various hostels

1. Kathmandu University Boys Hostel: 204
2. Kathmandu University Girls Hostel: 160
3. Kathmandu University Girls Hostel: 60
4. Kathmandu University International Hostel: 14
5. TTC Hostel: 28

A hostel operating guideline is prepared to facilitate smooth operation of hostel. (*See Annex C5-Q79-a*)

80. Give details of the facilities for drinking water and toilets. (0.5)

Drinking water: Water Jars are placed in different location, so that people have easy access to drinking water facility. At least one Jar is placed in each floor. Water is being supplied by Dhulikhel Municipality. The drinking water facility is enjoyed by students/faculty of SOE, SOS, staff of central office and visitors. Kathmandu University has its own water purification and bottling plant under the banner of **aKUa**. It provides pure drinking water to students, staff and visitors throughout the university. The facility has U.V. Treated-R.O. system 500/lph, auto flushing, auto cleaning conductivity meter, anti-scaling system, auto running system with warning devices. (*See Annex C5-Q80-a, b*)

Toilets: School has separate toilets for boys and girls at every block in the university. Toilets have the facility of regular water supply, hand washing basing, soap, towels, and water flush. Most of the toilets are equipped with automatic taps and flushing system using sensors primarily to maintain proper toilet hygiene and conserve water (*See Annex C5-Q80-c*)

B. Library as a Learning Resource

Note: SOE uses Central library of KU which is a shared facility of SOE, SOS, and Department of Management Informatics and Communication.

81. a. What are the working hours of the Library? (0.25)

On working days **7:00 AM to 8:00 PM**

On holidays (Library is closed during holidays declared by the University)

(College library is opened 7 days a week)

Book Circulation : 7:00 AM – 8:00 PM

b. Does the Library provide open-access to students? (0.25)

Yes ☒

No ☐

Yes. The library is open access to students. Students can enter the library, use the library space, issue books with their valid identity card. Students can also get access to library resources through Kathmandu University Central Library (KUCL) online Public Access catalogue (OPAC). (*See Annex C5–Q81–a*)

There are a set of rules and regulations to be followed by the students/library users while using the library facility. (*See Annex C5–Q64–d*)

82. Mention the total collection of documents. (3.5)

- Books (0.2) **73,200**
- Current Journals
 - Nepalese (0.2) **5**
 - Foreign (0.2) **4**
- Magazines (0.2) **12**

➤ Reference Books* (1.0) **73,200** (*combined Reference and Text Books)

- Text Books* (0.2) **73,200** (*combined Reference and Text Books)
- Refereed journals (0.4) **500+** including online Journal
- Back Volumes of Journals (0.2) **1127**
- E- Information Resources (0.4)
 - CD's/DVD's: **1222**
 - Databases: **Yes**
 - Online Journals: **500+**
 - AV Resources: **200**
- Special collection (0.5)
(please specify)

(Competitive Examinations, Old Book Collection, Manuscripts)

The library is grouped under various classifications such as Text Books, Reference Books, Magazines, etc are kept in separate sections. In addition to the proper classification of library books, there are library staffs to facilitate the effective use of the library facilities. This has made the use of library very user friendly and efficient.

83. Give the number of books/journals/periodicals that have been added to Institution Library during the last two years and their cost. (1)

	The year before last FY 2073/074		The year before FY 2074/075	
	Number	Total cost	Number	Total cost
i. Text books	3000	34,72,150.24 (total cost for books/journals/periodicals/ magazines)	4200	57,54,718.34 (total cost for books/journals/periodicals/ magazines)
ii. Other books				
iii. Journals/periodicals	9		9	

84. Mention (1)

i) Total carpet area of the Institution Library (in sq.mts.) [25,000 sq. ft] (0.25)

Central Library

(ii) Total number of Departmental Libraries [6] (0.25)

Each Department has its own library within their facility.

(iii) Seating capacity of the Library [200] (0.25)

(iv) Open student access to Library [yes] (0.25)

85. Give the organizational structure of the Library. (0.5)

(i) Total number of staff (0.3) **8**

a. Professionals (List with qualifications) **1 (Masters in Library Science)**

b. Semi-professionals **6**

c. Others **1**

(ii) Library advisory committee (0.2)

Library advisory committee is a seven member committee consisting of Registrar, Examination Controller, Dean of SOE and SOS, Director Student Welfare Directorate, Library in charge, and student representative from Student Council. (See Annex C5-Q85- a)

86. Staff development programs for Library (0.5)

(i) Refresher/orientation courses attended

(ii) Workshops/Seminars/Conferences attended✓

(iii) Other special training programs attended

MrDev Raj Adhikary, Librarian, holds Masters in Library Science. The degree is under the staff development program, Kathmandu University.

87. Are the Library functions automated? (0.5)

Yes ☒ No ☐ If yes: Fully automated ☒ (0.5) Partially automated ☐ (0.25)

Name the application software used

Software for University Libraries (**SOUL**) developed by INFLIBNET Centre, an inter – university center of UGC of India. (*See Annex C5–Q87–a*)

88. What is the percentage of Library budget in relation to the total budget of the Institution? (0.5)

Overall percentage of library and internet services is 2.2% except medical school. Six schools have total budget of NRs. 22,816,000/-, among this major budget is utilized in central library which will be benefitted by SOE and SOS. (*See Annex S1-Q3-d*)

89. Does the Library provide the following services/facilities? (10 x 0.1 = 1)

- Circulation Services ☒

Yes library provides lending services and facilities for return of books. (*See Annex C5–Q89–a*)

- Maintenance services ☒

Library is responsible for proper maintenance of books, journals, and other resources. If any kind of mishandling is done by students or library users, library personnel have authority to impose fine.

- Reference/referral service ☒

Library authority can suggest related books or if some books or resources are not available in central library, they can refer to other libraries of KU or other institutions as well.

- Information display and notification services ☒

News about new resources is published in website as well as library notice board. If any student is late in returning the book/library resources he/she is notified about the due date.

- Photocopying and printing services ☒

Photocopy and printing services is not available within the library block, but just outside the block. It is a paid service for students and other interested people.

- User Orientation/Information Literacy ☒

If someone needs orientation about library services, library staffs are responsible for orienting people.

- Internet/ Computer Access ☒

Student/staff have free high speed internet access.

- Inter-Library Loan services ☒

Inter-Library Loan services prevails but only between the libraries of KU.

- Networking services ☒

KU central library has developed network with other libraries of KU as well as libraries of different academic institution.

- PowerBackup facility ☒

Generator and UPS service is available to ensure uninterrupted electricity supply in Library.

90. Furnish details on the following (1.5; *to be equally distributed*)

- | | |
|--|------------|
| (i) Average number of books issued/returned per day. | [150+] |
| (ii) Average no. of users visited / Documents consulted per month | [15,000] |
| (iii) Please furnish the information on no. of Log- ins in to the E-Library Services/E- Documents delivered per month. | [200] |
| (iv) Ratio of Library books to number of students enrolled | [33:1] |

CRITERION 6: STUDENT SUPPORT AND GUIDANCE (10 MARKS)

91. Furnish the following details: (0.25 x 4 = 1)

- Percentage of regular students appearing for the exam. Around 95% of students appear in the regular exam. Remaining 5% do not appear in the regular exam citing several reasons like: personal problem, health issues, lack of preparation, etc. (*See Annex S1-Q19-a,b,c,d*)
- Dropout rate (drop out from the course) 2-5% students are the dropout rate. The dropout rate is due to several reasons like: lack of interest in the enrolled course, unable to attend the exam, failure in the exam, studying abroad, etc.
- Progression to further study (Bachelors to Master, Master to MPhil/PhD) The trend is around 70% students proceed further from Bachelor to Master and around 30% from Masters to PhD.
- Prominent positions held by alumni

Dr. Hari Pd. Neopane, Professor and Associate Dean, School of Engineering

Dr. Bivek Baral, Professor, Mechanical Engineering

Dr. Daniel Tuladhar, Associate Professor and Head of Department, Mechanical Engineering

Dr. Bal Krishna Bal, Associate Professor and Head of Department, Computer Science and Engineering

Dr. Prachand Man Pradhan, Associate Professor and Head of Department, Civil

Mr. Anup Banskota, undergraduate from computer department and now Information Technology chief of Province no 5.

Dr. Laxman Poudel, PhD from Mechanical department and now chief of Pulchowk campus.

Honorable Sushil Bhatta, member of National Planning Commission

Mr. Sixit Bhatta, graduate from electrical and now founder of Tootle, an entrepreneur.

92. How many students have passed the following examinations in the last five years? (0.25 x 4 = 1)

- Nepal Civil Services Examinations
- Other employment related examinations
- International level entrance examination
- Others (please specify)

Here we are providing the information of two departments: Chemical and Geomatics under this section.

There are 16 chemical engineering students working in Non-Governmental sectors. Similarly, 96 students are working in government sectors from Geomatics Engineering Department. The detail is provided in the (*See Annex C6-Q92-a*).

93. Does the institution publish its updated prospectus annually? (1)

Yes ☒ (1) No ☐ (0) If yes, what are the contents of the prospectus? (attach a copy)

Yes, School publishes its updated prospectus annually. In addition to this, every year course brochures are also updated and published. In case of few post –graduate courses, course brochures are not updated every year.

Undergraduate Brochures (*See Annex C6-Q93-a*)

School Prospectus (*See Annex C6-Q93-b*)

94. What kind of financial aids are available to students from the government, the institution and others? Give details. (0.5)

KU SOE Scholarship

The scholarship Scheme is provided by the school to several students of different departments. The detail is in the appendix (*See Annex-C6-94-a,b*).

UGC Formula Funding Scholarship

Students are provided scholarship according to UGC formula funding scheme. (*See Annex C6-Q94-c*)

Need Based Scholarship

Under this category, an educational loan will be provided to the selected students enabling them to meet 25% to 50% of total fees charged by the university. This educational loan depends on available fund in each UNG program of SOE as per KU rule. It is required that the student must sign a contract paper with the university (as a bond paper) for its refund. Other conditions are same as that in KU scholarship. The number of this educational load offered in this scheme depends upon the available loan scholarship fund which in turn is dependent on the return/payment of the loan received by students in earlier years. (**See Annex C6-Q94-a,b**).

ii) KU Graduate Assistantship:

This assistantship is focused for M. Tech./M.S. by research, M. Phil. and Ph.D. students of SoE based on their academic performance. In this category, student is provided teaching assistantship to cover partial or full tuition fee (*See Annex C6-Q94-b*).

iii) Other Scholarships for Engineering Students:

a) Geomatics Engineering

The support is provided through government. The scholarship is divided according to the several provinces.

SN	Description	Quota	Scholarship
1	Employees of Nepal Government	4	100%
2	Inclusive quota (3 from each province): <ul style="list-style-type: none"> Female -1 Adibasi Janjati/ Dalit/ Madhesi-1 Backward region/ Economically deprived -1 	21	35%
3	Provincial Open Merit (3 from each Province)	21	-
4	Open Merit	8	-

b) Computer Science and Engineering

- Two masters' student supported in their tuition fee through MOOC project during their master's degree.
- Some faculties are pursuing PhD under Faculty Development Program supported by School of Engineering (*See Annex C6-Q94-b*).

c) Mechanical Engineering

- Student support to master's student through the project named “*Energy Efficient Building Design (EEBD)*” is through UGC formula funding.

Faculty development/ Project scholarship are for PhD, MPhil, and M.S. by Research students, so the time frame of scholarship is till they complete the course.

d) Turbine Testing Lab

Turbine testing lab is providing scholarships to three students in M.S. by Research and two students in PhD. The supporting document is in the appendix *(See Annex C6 – 94-b)*

95. Mention the number of students who have received financial aid during the last two years.

There are total 40 students who got scholarship with the support from School of Engineering in last two years. Out of them 8 students are from Computer Engineering, 4 from Electrical Engineering, 8 from Civil Engineering, 4 from Geomatics Engineering, 4 from Architecture, 8 from Mechanical Engineering and 4 from Chemical Engineering. The detail is provided in the appendix *(See Annex C6-Q94-a)*

96. Does the institution have an employment cell and a placement officer who offers career counseling to students? If yes, give details of the cell and its office. (0.25 x 2 = 0.5)

i. Employment cell: ☐ Role:

ii. Placement officer: ☐ Role:

No, separate employment cell and placement officer do not exist. But school and departments have maintained a good relationship with different organizations which are potential job providers. In past some of the organization have visited school for hiring students. Past data shows that 80% + undergraduate students and 100% post graduate students are employed immediately after their graduation.

For example, computer department has assigned a separate coordinator for the internship program. Internship program is creating a good platform for the job placement of the students. Further in chemical department, faculties have used the personal links to create a job for the chemical engineers. *(See Annex C6-Q96-a)*

97. Do teachers participate in academic and personal counseling? (0.5)

Yes ☒ No ☐ If yes, give details as to how they are involved.

Teachers actively participate in academic and personal counseling. If students have course related problems, full time teachers and teaching assistant are available to provide needed help. For example in computer department, a separate internship coordinator is assigned to bridge the gap between industries and the students. Separate counseling cell is established to provide counseling to students. The detail of the counseling cell is provided in the appendix *(See Annex– C6-96-a)*.

98. How many students were employed through placement service during the last year?

	UG students	PG students	Research scholars
i. Local firms/companies	20	10	0
ii. International firms/companies	130	5	1
iii. Government	20	10	1
iv. Public (semi-government) sector	60	5	6
v. Private sector	90	20	2

There are no students employed through placement service because we do not have such kind of particular specified cell but the department usually displays the notice/ circulate emails of the vacancy call in several institute when those students request the department for the student recruitment.

99. Does the employment cell motivate the students to seek self-employment? (1)

Yes ☒ No ☐ If yes, how many are self-employed (data may be limited to last 5 years)?

School motivates students to be entrepreneurs. Kathmandu University Business Incubation Center (KUBIC) was established in 2015 to create a platform for the students to be an entrepreneur. Further a course called Entrepreneurship is taught in undergraduate (https://ku.edu.np/news-app/result-of-kubic-website-design-competition4855?search_site_name=kuhome&show_on_home=0). (*See Annex C6-Q99-a*)

100. Does the institution have an Alumni Association? (0.5)

Yes ☒ No ☐ If yes, indicate the activities of the Alumni Association.

Kathmandu University Alumni Association (KUAA), was established to foster a lifelong intellectual and emotional connection between the university and its graduates. In addition to KUAA, each department has their own alumni association.

Alumni association of University is not that active, but at present members are trying to increase alumni activities. For example, Department of Computer Science and Engineering is working on developing a web portal for alumni association. Further they organize the alumni meet every year. Different Alumni group created by the alumni themselves are also very active recently in social sites. (*See Annex C6-Q100-a*)

101. How the policies and criteria of admission are made clear to prospective students? (0.5)

Policies and criteria for admission are clearly defined in college manual and website. Interested students can download information from university website (www.ku.edu.np), or can collect brochures/manual from college. If any prospective students have queries, they can post it in college website or visit college for clarification. Further, university also published admission notice in leading national dailies.

102. State the admission policy of the institution with regard to international students. (0.5)

International students are encouraged to get admission into the school's academic programs for which they need to meet eligibility criteria for each academic program including research degrees as prescribed by the university. In general international students come to this school for a semester or so either for research purpose or to earn few course credit or internship. They need to take care of their expenses by themselves or expenses are being borne from the respective research. (*See Annex C6-Q102-a*)

103. What are the support services given to international students? (0.5)

International student service office <input checked="" type="checkbox"/>	Special accommodation <input checked="" type="checkbox"/>	Induction courses <input checked="" type="checkbox"/>
Socio-cultural activities <input checked="" type="checkbox"/>	Welfare program <input checked="" type="checkbox"/>	Policy clearance <input checked="" type="checkbox"/> Visa Support <input checked="" type="checkbox"/>

Global Engagement Office is established in the university to facilitate the international students who are in a visit in Kathmandu University for various purposes.

A separate block named "International Guest House" is built for accommodation of international students. International guest house has facility of attach bathroom and attach kitchen. (*See Annex C5-Q67-c*)

Orientation is given to international students regarding the course.

International students are involved in different social- cultural activities to make them aware about Nepalese cultural aspect.

If international students need any kind of support in terms of documents or information regarding visa process, School makes necessary arrangements.

104. What are the recreational / leisure time facilities available to students? (1)

Indoor games ☒ Outdoor games ☒ Nature Clubs ☐ *Debate Clubs ☐
Student Magazines ☒ Cultural Programs ☒ Audio Video facilities ☒
Any others -----

In door games : Chess, Table-tennis, puzzles

Outdoor game: Basket Ball, Football, Cricket, Base Ball, Badminton, Volley Ball, Swimming pool

***Debate club:** No separate debate club is formed, but debates are organized through various students clubs.

Student's magazines / cultural programs: Cultural programs are organized during welcome and farewell programs of students. Clubs are responsible for organizing such program. Different clubs on yearly basis publish a newsletter/magazine related to their department and work.

Audio Video facilities: Audio Video facilities are available for students while organizing any kind of event. Both boys and girls hostel have Television.

The relevant pictures of different sections are provided in the appendix.

(See Annex C6-Q104-a)

CRITERION 7: INFORMATION SYSTEM (10 MARKS)

105. Is there any cell in the institution to analyze and record various academic data? (2)

Yes✓ ☐ (2) No ☐ (0) If yes, mention how does the cell work along with its compositions?

There are multiple cells at different levels to record and analyze various academic data.

- **Office of the Controller of Examination**

Office of the Controller of Examination located at central campus Dhulikhel is the central body responsible for analyzing and recording various academic data. Details of all the students and their academic information could be accessed at the Office of the Controller of Examination. Composition and responsibility of the Office of the Controller of Examination is guided by Examination Policy, 2050.

Exam Board Composition and Examination Policy. (See Annex C1-Q3-k)

- **Respective Departments**

Respective departments are the immediate body that analyze and maintain students all the past academic records including grades throughout their study period. Each department maintain detail record of internal evaluations, end semester marks, other project evaluations obtained by the students and their attendance details. Respective Department is also responsible for reporting students' academic data to the Office of the Controller of the Examination.

- **Dean Office**

School of engineering dean office collects academic data from all the departments and reports to the Office of the Controller of Examination for analysis. Dean Office acts as the main line of command between departments and Office of the Controller of Examination to communicate academic data back and forth. Dean office keeps records of the academic data and issues to the individual departments. Dean office has authority to analyze academic data and use these results to make policy decision.

- **Information System Management Section (ISMS)**

ISMS is the central information system management cell that provide access to university resources, programs and services, maintains student's information, human resource data, and financial details. ISMS also manage E-Learning Forum (ELF) where faculties can manage their course related academic documents and all the students can easily access these information.

- **Library**

One part of library is always allocated to record and maintain thesis and dissertation of graduate students for future references.

- **Website**

Students can access needed information form school website. Information related to admission, students life, and results can be found in the website.

<http://soe.ku.edu.np/>

106. What are the areas on which such analysis is carried out? (1.5)

Office of the Controller of Examination being central body analyses students' academic grades in each semester and evaluates cumulative GPA. Ratio of students graduated in each department is also analyzed. Office of the Controller of Examination also analyses students' enrollment in terms of program, gender and nationality. Software based academic data recording, analysis and processing system is used

(See Annex C7-Q106-a).

Department-wise analysis of students (See Annex C7-Q106-b)

Details of graduates (See Annex C7-Q106-c)

Results (See Annex C7-Q106-d)

Gender analysis (See Annex S1-Q15-a, b,c)

107. How these analyzed data are kept in the institution records? (1)

All the academic data are kept in both forms (Softcopy: as computerized files and Hardcopy: as printed file folder) in the Office of the Controller of the Examination. Education Management Information System (EMIS) is specially designed to monitor the performance of education programs where all the academic data could be retrieved. Dean office keep record of all the current students enrolled in school of engineering. In addition to this respective departments also keep record of the academic records of current enrolled students. One copy of the analyzed academic data is maintained at the Registrar office.

108. Are these information open to the stakeholders? (1)

Yes ☒ (1) No ☐ (0) If yes, explain how they are disclosed?

Most of the academic data including graduate list in each department, academic grades and grade evaluation scheme are open to the concerned stakeholders and these information could be accessed at multiple places at different time. For the annual convocation ceremony, a printed list of all the graduates in all the departments and programs are made openly available to all the concerned stakeholders (See Annex C7-Q108-a). Annual report published by university also publish detail data on the graduate student of the year. The financial data in the form of audit report are also published in KU webpage.

For the academic grade and evaluation scheme, students are informed their academic status through notice board publication of the result (by the Office of the Controller of Examination) followed by printed copy of the GPA sheet for each semester (by respective departments). And the grade evaluation system is printed in all the GPA sheets and could also be found in university website. The cumulative GPA of their study period is made available after their graduation.

The academic data of an individual could be retrieved from the Office of the Controller of Examination anytime by the individual himself/herself.

109. Are the methods of study and analysis also open to the stakeholders? (1)

Yes ☒ (1) No ☐ (0)

School does not publish the academic data analysis methods to all the stakeholders, however, as our institution believes in principle of transparency, if any stakeholder is interested to know about how the analysis is carried out, he/she can learn the detail analysis method and outcomes from respective department or the Office of the Controller of the Examination.

Students and faculties are well informed regarding academic credit hours, credit calculation, grade point values, grade evaluation and CGPA calculation scheme.

110. Is there any mechanism to receive comments or feedbacks on the published data? (1)

Yes ☒ (1) No ☐ (0) If yes, explain how does it happen?

There are provision of feedbacks and comments on the published academic data at different levels.

The primary level to receive such feedbacks and comments is in departmental level. If any students are not satisfied or/and have inquiry on the published data, he/she is encouraged to consult respective department about their dissatisfaction/inquiry which will be reported to the Office of the Controller of Examination by the department. For the case of result and grade evaluation, there is a provision of retotaling to all the concerned students. In the process of retotaling and feedback process, if the student is not satisfied there is a provision of

rechecking where students can check their answer sheet along with the examiner as indicated in evaluation scheme for undergraduate programs (*See Annex C7-Q110-a*)

If stakeholders want to provide any feedback regarding published data they can do it during meeting or by sending email or write letter or post in comment/suggestion boxes kept in departments.

111. What are the impacts of such information system on decision making process? (1.5)

Produce in brief the impact analysis.

Undoubtedly, academic data analysis and record has played an influential role in decision making process.

- Student enrollment, their academic performance and graduate ratio in different departments and programs helps to trace and monitor status and performance of departments and different programs within departments which directly influence on decision making process to expand/combine existing programs and launch new programs.
- The central system of the record have made easy access to individual's academic record (previous semester's grade and attendance record) at any time. Such information are very useful to handle different situations like parents/students complain, case of dispute/conflict, selection of excellent candidate for scholarships and exchange programs, etc.
- The academic data also reflects student performance in different programs/courses that ultimately helps on revision of the program/course structure.
- Based on the academic data, the academic calendars are planned and required modification are made as per required. For example, exams are rescheduled based on the academic progress of that semester.
- Information system has also helped in maintaining updated attendance record of students.

112. Give examples of quality improvements initiated due to the use of information system. (1)

- Based on use of such academic data, number of students were increased in existing programs like BE Geomatics Engineering and expanded BE Mechanical Engineering program from 48 students to 120 students (30 per subdivision) with subdivisions (Automobile, Design and Manufacturing, Energy Technologies and Hydropower).
- New programs like BE Chemical engineering and Bachelor Architecture are introduced.
- GPA deflection system was introduced to improve quality of the educational system, however based on the academic data and feedbacks from all the stakeholders, the GPA deflection system has been eliminated.
- With suggestions from stakeholder's changes or revision in course contents have been made.
- Practice of publishing students' attendance record in notice board has helped in making student more punctual.
- Due to updated information on website regarding courses, more students are attracted towards the school. This has helped in drastically increasing the number of applicants in past years.

CRITERION 8: PUBLIC INFORMATION (10 MARKS)

113. Is there public information cell within the institution? (2)

Yes ☒ (2) No ☐ (0) if yes, give details.

School of Engineering is located at the premises of the central office of Kathmandu University, Dhulikhel where the VC, registrar and HR offices are located. There is a reception in central office which acts as public information cell within the university. Besides reception, there is an information officer to disseminate the information.

Information Officer

Dr. Hem Raj Kafle has been appointed as an Information Officer of Kathmandu University who is responsible to provide official information of the University. (*See Annex C8-Q113-a*)

Website

School website is updated regularly, which provides latest information about school and the University. All events and news are updated regularly. <https://ku.edu.np/>

Information System Management Section (ISMS) has been developed for effective circulation of information. ISMS is responsible for providing online access to university resources, programs details, and information about schools. At present ISMS services are limited to provide basic services, but in near future School is planning to strengthen ISMS and provide all range of information (course updated details, admission related information, student's/staff database) through ISMS. Any Queries related to school and university can be sent to info@ku.edu.np which is forwarded to respective schools and departments. (*See Annex C8-Q113-b*)

Reception: School reception also acts as a public information point. People can contact school reception for any kind of information.

Social Media

There is an official facebook page of Kathmandu University named Kathmandu University -NEWS FORUM which provides news regarding school and university.

114. What are the areas of information published by the cell? (1)

Academic ☐ (0.25) Administration ☐ (0.25) Financial ☐ (0.5) All ☒ (1.0)

Annual report is published every year, with support of all concerned departments by the University. Stakeholders can get annual report from university. Annual report comprises of school's administrative details, financial details, and details about the year graduates.

Administrative information related to vacancy and contract opportunities are published in newspaper. Similarly, financial Audit Report is available in the website. (<http://soe.ku.edu.np/>)(*See Annex C8-Q114-a*)

All the policies and guidelines, notices, upcoming events and research activities of School of Engineering, Kathmandu University is available in the website.

A bimonthly Bulletin is published which comprises of all the recent activities such as events, appointments, advertisements and transfer within the department, school and university. (*See Annex - C8-Q114-b*)

A detailed report of School and University is published in the newspaper every year on the convocation day of the school. (*See Annex C8-Q114-c*)

Objectives, Rules and Regulations of Library are available in the websites.

Every year an updated prospectus is printed providing details about all the offered courses with detailed fee structure. (*See Annex C6-Q93-b, See Annex S1-Q11-a, See Annex C8-Q114-d*)

115. Where are these information published? (1.5)

Newspapers ☒ (0.5) Magazines ☐ (0.5) Institutional special magazine dedicated for this
☒ (0.5) Bulletin ☒ (0.5) Social Media ☒ (0.5)

Administrative information related to vacancy and contract opportunities are published in newspapers and website. Likewise, annual financial report is published and is available in website.

News related to events, seminar, conferences within the department are published in the website of department.

News related to school and University is available in the official facebook page of Kathmandu University.

News, events, appointments and transfers of academic and administrative staffs of the school are published in a bimonthly Bulletin.

116. How often are these information published? (1)

Yearly ☒ (1) in 4 years ☐ (0) regularly ☒

Annual report is published every year, at the end of every fiscal year.

The School publishes its prospectus every year during July/August.

KU Bulletin is published bimonthly.

Facebook Page of university is updated regularly.

Webpage of school and university is updated regularly.

117. Mention all such publications of last two years (1)

Areas	Year 2074, place of publication	Year 2075, place of publication
Program details (Prospectus)	KU	KU
Financial, administrative, academics (Annual Report)	KU Website	KU
News, Events (Bulletin)	Dhulikhel (Bimonthly)	Dhulikhel (Bimonthly)

118. Does the cell also collect responses, if any, on the published information? (1)

Yes ☒ (1) No ☐ (0) If yes, give details

There is no formal mechanism to collect responses however the feedbacks from the newspaper are collected and analyzed through emails, during personal interaction, and meetings at different levels.

119. Is there any system to evaluate the impact of public information on quality improvements? (1)

Yes ☒ (1) No ☐ (0) If yes, how these impacts are measured?

Feedbacks from newspapers are collected in central library which forward them to the concerned school and department for necessary actions.

Dean and HoDs take necessary steps to address issues raised on public media after discussion at department /school meetings.

120. Mention some positive impacts made by the public information practice. (1.5)

- When the university is closed due to disturbances, the stakeholders publish a notice in the newspaper to open the university and the university officials were forced to act accordingly.
- Effective dissemination of school and university information.
- Prompt data organization, analysis and comparison of the available financial and administrative data.
- Chance to improve in the upcoming days.
- A proper and reliable source of information prevails.
- Analysis and comparison has been made easy due to data availability.
- More people are aware and the numbers of applicants are increasing every year.
- A system of transparency has been developed.
- helps to plan school activities by addressing the feedbacks.

Section I: Preamble

Kathmandu University (KU) is an autonomous, not-for-profit, non-government institution dedicated to maintain high standards of academic excellence. It is committed to develop leaders in professional areas through quality education. Within a period of 27 years, KU has built not only reasonable infrastructure, but also established a track record of academic excellence.

School of Engineering (SOE) at Kathmandu University was established in 1994 with the aim to produce quality engineers in the country. During its establishment SOE focused on those areas where government did not have emphasis at that time.

Engineering education started in Nepal in the year 1942 in the form of Technical School. In 1970, the name of Technical School was changed to Nepal Engineering Institute. In 1973, Nepal Engineering Institute was merged to Tribhuvan University as Institute of Engineering (IOE). The first bachelor of engineering program was started in Tribhuvan University in 1978 in civil engineering. There was a long gap in the government system to start the programs in emerging engineering subjects due to several reasons.

School of Engineering started BE program in Mechanical, Computer and Electrical & Electronics Engineering from 1994 for the first time in the country. This year has been milestone for engineering education in the country. Nepal Engineering College also started in the same year in private sector.

School of Engineering of Kathmandu University is running its program within the umbrella of the vision and mission of Kathmandu University together with six other schools. Gradual growth of the school can be reflected from table given below:

Year	Activities
August 1994	Started four-year bachelor courses in Electrical and Electronics Engineering, Mechanical Engineering, and Computer Engineering
August 2001	Started Graduate programs in M.E. (Communication), M.E. (Mechanical), M.Tech(IT) and M.E. (Computer)
August 2003	Started M.S. by Research
August 2004	Started Graduate program Master Program in Electrical Power Engineering (MEEPE)
August 2007	Started four-year bachelor course in Geomatics Engineering
January 2008	Started PhD program in Mechanical Engineering
September 2009	Started PhD program in Computer Engineering and Civil Engineering
August 2009	Started four-year bachelor course in Civil Hydropower Engineering
February 2011	Started Masters Program in Planning and Operation of Energy Systems (MPPOES)
February 2011	Started PhD program in Electrical and Electronics Engineering
August 2011	Establishment of Turbine Testing Laboratory

August 2013	Started Masters in Land Administration program in collaboration with school of Arts and Land Management Training Center
August 2015	Started four-year bachelor course in Chemical Engineering
August 2015	Expansion of B. E. in Mechanical Engineering by including four specializations (Automobile, Design & Manufacturing, Energy Technology, Hydropower)
August 2015	Started Graduate program Master in Engineering in Structural Engineering
August 2017	Started five-year bachelor course in Architecture
August 2018	Started Master program in Energy Efficient Building Design
August 2019	Started Graduate program Geoinformatics
August 2019	Started Graduate program Master in Sanitation Technology
August 2019	Started PhD in Geomatics Engineering

KUSOE is the premier institution in the country for offering professional engineering courses in a number of areas. Many other institutions have followed its approach and strategies. Its academic programs intends to produce highly competent, motivated and entrepreneurial candidates and professionals contributing to national, regional and global problems related to engineering. Till 2019, 3578 students have graduated in different areas from School of Engineering. KUSOE has developed linkage with 57+ international organization and various national organization.

KUSOE academic and research programs are carried out with following prime objectives:

- To produce quality engineering graduates of international standards
- To attain excellence in engineering education and applied research
- To become a center of excellence in energy and ICT research
- To produce highly qualified, confident, and creative graduates with entrepreneurial attitude
- To collaborate with the local industries and organizations in making the engineering education more relevant to the domestic context and in obtaining in-country applied research solutions to the domestic technical problems

From its establishment KUSOE has always opted for quality in its management and academic programs. For shaping KUSOE various people have made valuable contributions. Prof. Inge Johansen, former Vice Chancellor of Norwegian University of Science and Technology assisted and guided SOE since 1993 to 2017 for development and implementation of academic program and infrastructure. Recognizing his contribution to SOE, the building 08 Block is named after him.

Prof. Dr. John C. Badoux, a renowned Swiss Scholar has been contributing for enhancement of academic programs like Civil Engineering and Environment Engineering. He has provided his valuable views for further development of the academic programs. He visits school on timely basis and gives his valuable suggestions. Similarly, Prof. Dr. K. Y. Park from Kongju National University (South Korea) helped to establish chemical engineering department and served here until the graduation of the first batch.

Mr. Finn H. Enger, in the year 2001, produced a detailed report providing “**Recommendations for Further Development of Management and Organization at Kathmandu University**”. On the basis of recommendation provided by Mr. Enger many managerial level changes and restructuring had been done in the university.

David J. Young, Visiting Faculty Member/ UMN Secondee, in the year 2000 provided a detailed report for **Management Development of the institution**. Mr. Young suggestions have played an instrumental role in shaping the management system of institution. School has incorporated suggestion of all experts and shaped school management.

School of Engineering takes opinion of experts for developing its academic program and management. Experts are made members of different committees and during meeting suggestions and views are collected.

The biggest strength of school is its own flexible and dynamic academic program. School has an established brand name which has good national and international recognition. School has its own building and other physical facilities. To provide exposure to both faculty and students school have built National /International linkage/collaborations.

In the course of time school has faced various challenges and obstacles, both internal and external. The frequent transportation obstacles resulting due to road blockage has been problem for conducting regular classes. As school is situated in semi-rural area it's difficult to maintain faculties, and instability of faculties is a widely observed challenge.

SOE has great challenge to act and create meaningful presence in the increasing competitive academic sector. With more international academic opportunities, quality of applicants has also decreased. Frequent political instability and interference of youth political leaders in school management has resulted in closure of school from time to time. Regardless of the problem and challenges KUSOE has been able to create its distinct brand name and credibility in market.

Why Quality Assurance and Accreditation (QAA)

Growing competition in academic sector has created such an environment that to survive academic institutions need to enhance and maintain their quality. Accreditation is a step towards accessing ones quality and promising to make necessary improvement in needed areas. With growth of the sector and growing competition, demand for greater transparency & accountability has come. QAA system would help SOE to:

- Provide information to the government, students and employers regarding quality status of School
- Provide instrument for comparing Higher education programs (e.g., Bachelor's and Masters') within the country as well as internationally
- Develop a culture of compliance to academic quality standards

- Strengthen the system capacity for institutionalized quality monitoring and feedback
- Inspire the institutes and professionals to achieve institutional environment for better quality of teaching-learning and research
- Encourage accountability

Section II – Criterion-wise narrative

POLICY & PROCEDURES

Objectives/targets

Objective of the policies developed and considered as the directing philosophies by the school is to streamline the activities of the school and departments involved towards achieving the vision, mission and goals of the school. Policies developed in larger sense, are aligned with the basic policies of Kathmandu University. Several procedures have been developed and implemented with objectives to run the activities of the school smoothly, systematically and fairly. SoE targets to achieve its goals in a sustainable way by developing widely accepted policies in a participative manner. Procedures followed are well documented and targets in reducing delays, maintaining consistency and transparency.

Current status

Current policies of SoE include clearly defined vision, mission and objectives. The school also shares a common vision, mission and objectives of the university. The strategic plans, annual plans and day to day activities of the school are all developed and performed following the declared policies of the school. Various policies guide the school in teaching learning, evaluation, capacity building, administration and financial matters. These policies are based on globally accepted guiding principles like, participation, inclusiveness, transparency, fairness, merit and quality. School involves its stakeholders while making major decisions.

School has developed a defined structure to look after different work areas leading to decentralization of decision making and implementation. Responsibilities and authority of each unit is clearly defined in guiding documents and policies. Policies of SoE promote new innovation in curriculum design and other regular activities. Internal academic audit is an integral part of school policy to ensure quality education. Different departments, /units/people are involved in academic audit.

School has enacted defined procedures for the regular and strategic activities. These include the procedures for HR recruitment, HR administration, student enrollment, curriculum design and acceptance, launching of new programs, procurement, financial activities, quality assurance, feedback and complain handling.

Fulfillment analysis

SoE is following defined policies and procedures. The school regularly organizes meetings to make its faculties, students and other stakeholders aware about its policies and procedures. It has achieved significant progress in the direction which has resulted in reduction of disputes and confusions. However, all stakeholders are still not aware about it. School plans to make it more visible. Excited with the improvements brought by the practice of internal audits, school has accepted the policy of external academic audit involving outside experts and independent evaluators.

Performance appraisal, review and feedback system has been improved and the school has initiated the strict implementation of the procedure. The school accepts the fact that even policies followed must be periodically reviewed. However it has not been very keen in assessing their in effectiveness regularly.

Best practices

Best practices in the school include:

- Regular meetings within the school and the departments.
- Regular meetings of the concerned unit heads with the students.
- Regularly enacted annual plans, budgets, academic schedules and critical efforts in maintaining them.
- Inclusion of outside experts (both nation and international) view in curriculum design, implementation and quality assurance.

- Participative decision making process within the department and the school.
- Transparency, consistency and fairness in procedures.

Critical appraisal

Policies and procedures are well defined and are being followed in the school. Policies have been changed and updated. However there exists no system to periodically assessing their effectiveness. Policies are not visible for new comers and outsiders. Some accepted and practically followed policies are still not documented formally. Implementation also has room for improvement. Procedures must be updated and use of ICT can reduce procedural delays and efforts.

Efforts made

School has tried to make the policies and procedures more updated, clear and acceptable. Timely development of strategic plan and annual plan has been made mandatory. The school is trying to make the policy more visible by making the policies more accessible. Several administrative and procurement procedures have been mad online, reducing the delays and efforts. School has given due efforts to make its policies and procedures in agreement and supportive towards its mission, vision and objectives.

SWOC analysis

Strength:

- School has well documented policies and procedures that are being duly followed.
- Policies and procedures are in based on globally accepted principles.
- School is inclusive and participative in policy formulation.

Weakness:

- Mechanism to periodically assess the effectiveness of policy does not exist.
- Strict implementation of policies and procedures always not ensured.

Opportunity:

- Clear policies and procedures make decisions easy, accepted and efficient.
- Implementation of ICT opens door for improvement and efficiency.

Consequences:

- Ineffective and periodically not updated policies may make school less competitive in market and less attractive for public and students.

CURRICULAR ASPECTS

Objectives/targets

SoE intends to offer competitive, demand oriented and contemporary academic programs. It has policy to make its curriculum design flexible, dynamic and adaptable. The objective of each curriculum is to ensure the all round development of the students and to ensure that the students

have state of art trades and skills of the area. Each curriculum targets to fulfill the mission of the university by producing leaders in each subject area.

Current status

All the academic programs introduced and currently in offer in the school are in accordance to the goals and objectives of the school as well as university. In many programs, the school is the pioneer in the country which in itself is one of the policies of the school. The new curriculum is carefully designed after rigorous meetings, discussions, workshops, market analysis and critical review of global curriculum. School ensures that the curriculum focuses on practical based approach following the principle of 'learning by doing'. Curriculums are well documented and shared to stakeholders through brochures and web pages of concerned departments.

Curriculum strictly includes the components like seminars, workshops, field studies, reports, presentation, and projects. Internships are mandatory part of each curriculum. Each curriculum of the school has yearly projects. Each curriculum has elective options to cater for the varying need and interest of the students as well as industries. This also helps to impart the specialized knowledge to the students on specific subject. Curriculums of engineering courses currently have a common first year, enabling a horizontal mobility of students permitted by the availability of vacant seats. Curriculums ensure that graduates produced are aware of their civic responsibilities, community commitments and responsibilities as global citizen.

Through the well established procedures, curriculum can be and are revised. Courses are revised, replaced, or introduced on need basis to adapt to ever changing and evolving nature of engineering areas. Feedback from stakeholders, academics, industries and entrepreneurs are critical part of curriculum revision.

Fulfillment analysis

Curriculums designed in SoE are practical oriented and skill driven. The school emphasizes on regular update and revision of the courses and curriculum to ensure market compatibility. However some departments are slow to react to the global changes. The curriculum of SoE are comparatively flexible in national context, however global trends says that it needs to be even more flexible and interdisciplinary. The curriculum needs to be more design based and promoting self actualization.

Best practices

Best practices in the school include:

- Pioneer and innovative in curriculum design in the country.
- Conceptual understanding with practical knowledge is focused in the curriculum.
- Allowing electives in the curriculum to cater individual interests.
- Regular subject committees meeting to revise the curriculum.
- Regular faculty board meetings to formalize and document the revision of curriculum.
- Introduction and focus on yearly projects to realize learning by doing.
- Internships as part of credit earning in curriculum.
- Continuous approach and linkage with industries to obtain feedback.

Critical appraisal

The school focuses on relevant programs and curriculum. The curriculum are expected and targeted for over all development of the students. However, some departments are slow to adapt to the changes. Also some departments have not offered new programs in recent years. Students clubs are more focused on sports and social activities; they have not been utilized as machines for effective implementation and revision of the curriculum. Curriculum may be made more research oriented.

Efforts made

SoE is continuously making efforts to ensure that its curriculums are up to date and improved. Timely meetings of subject committees and faculty boards are encouraged. The school also has initiated the practice of tracer survey to measure the relevance of its curriculum. Initiations on encouraging the departments to start new graduate programs have been done. Departmental clubs of the students have in recent years activated to organize annual project exhibitions, talk shows and other activities supporting the curriculum. Efforts to improve the acceptance and effectiveness of internship have been done by organizing annual industrial interactions and networking events.

Consequences:

- Slowness in adaptation and revision may make the curriculum outdated.
- Lack of new programs may reduce the attraction towards the department.

SWOC analysis

Strength:

- Programs offered are relevant and market driven.
- Curriculums are flexible and continuously revised.
- Curriculum focus on learning by doing and practice.
- Internships are mandatory.

Weakness:

- Some departments have been slow in reacting to changes.
- Some departments have not introduced new courses in last several years.

Opportunity:

- Pioneer and market driven curriculum makes it front runner in job market increasing the attraction of students.
- Curriculum promoting self actualization encourages innovation.

TEACHING LEARNING AND EVALUATION

Objectives/targets

SoE intends to follow student centered teaching learning methods based on modern pedagogical strategies. Teaching learning methods are designed and supported to complement the curriculum of the programs. School intends to adopt systematic teaching methods promoting active learning and enabling higher order thinking. School targets to enroll those students who are capable and motivated to understand the course content. Evaluation mechanisms target a fair and periodical evaluation of students 'performances in achieving learning outcomes.

Current status

The school is following a fair and transparent annual student enrollment process through computer based entrance test known as Kathmandu University Central Admission Test (KUCAT-CBT). Teachers are encouraged to be open and recognize student's diversity in background and capacity. Preparation of course plans and lecture delivery plans have been made mandatory to improve the teaching learning processes. Course plans detail the contents of the syllabus and schedule of delivery as per the current academic calendar prepared by the school.

The school also encourages and incorporates other teaching methods in addition to lectures. These include laboratory sessions, hands on experiments, projects, field trips, presentations, assignments

and many more. Lecture delivery is widely done using audio visual aids. Multimedia projectors are commonly used delivery tool.

Faculty recruitment process is transparent and well documented ensuring fairness in selection. Teachers are always encouraged to participate in trainings/conferences as participant or as resource persons. School also regularly organizes trainings on teaching and evaluation mechanisms for freshly recruited faculties. Faculty development has been incorporated in core policy of the school to improve the capacity of its academic human resources. Opportunity to update themselves with a new degree and skill are provided within the school or even at other national and international universities.

Newly admitted students are oriented properly about teaching learning processes and evaluation mechanisms. The school has accepted continuous evaluation policy to assess students' performances. Formative examinations in the form of internal tests, assignments and presentations run throughout the semester while summative exams in the form of end semester examinations are conducted at the end of each semester. Student's feedback on the teaching learning methods and the course itself are taken at the end of the course. Teachers also prepare and submit course completion reports at the end of the semester. School also regularly conducts guest lectures and summer schools.

Fulfillment analysis

The school has a well established student enrollment and faculty recruitment system. These have been implemented and practiced for several years with great results. The school has made necessary amendments time and again to improve the system. A well planned academic calendar is prepared, however, due to several disturbances, inside and outside, the school has been struggling to maintain the calendar. Course plan, lecture delivery plan and course completion reports are made compulsory, however even after this, several teachers have been reported not to follow the course plan earlier submitted. The school intends to give emphasis on projects and practical based approaches, student centered teaching and continuous evaluation. However its implementation has not been strictly monitored. Teacher feedback and appraisal is practiced but has not been considered during incentives and promotion. No reward and punishment system exist.

Best practices

Best practices in the school include:

- Fair, transparent, inclusive and merit based student enrollment process ensuring intake of quality students.
- System of course plan and course completion report in implementation.
- Group projects, laboratory works, field trips, assignments and presentations integral part of teaching learning process.
- Transparent and scientific evaluation system based on internal and final examinations in place.
- Financial support and encouragement policy to participate in conference as participants and resource persons.
- Strong and encouraging faculty development policy in practice.
- External experts and professors hired as visiting faculties.

Critical appraisal

Although faculty appraisal and feedback are encouraged, many faculties are not much motivated in self appraisal. Teaching methodology trainings conducted are not regular and enough. Refresher courses need to be conducted for faculties. A system for identifying the preferences and capacity of student must be devised and practiced to complement student centered teaching learning. Student feedback must be given importance in incentives and faculty upgrading.

Efforts made

The school has made given due efforts in faculty development had has made significant progress. Most of the departments now have experienced strong faculty strength. School has made significant efforts to increase the number of student exchanges, conference participation of faculties and international cooperation. Significant achievement has been made in development of and practice of adoption of course plans and course completion reports.

SWOC analysis

Strength:

- Well established enrollment and recruitment system
- Experienced faculties with international degrees and well trained in teaching methodologies.
- Enough full time and permanent faculties.
- Course plans and other teaching planning tools in practice.
- Faculty development system in practice.

Weakness:

- Self appraisal not whole heartedly accepted by some faculties.
- Pedagogy trainings not enough.
- Feedback and appraisals not given due importance in decision making.
- Project supervision not given importance in certain departments.

Opportunity:

- Experience faculties can be key factor in becoming center of excellence in engineering education.

- Faculties from diverse background can bring innovative ideas in teaching learning process.
- Student and faculty exchange can be strong factor for providing global exposure to state of art technologies.
- Inclusion of projects, presentations, group works and internships can set strong platform for hands on experience and hence increase job opportunity.

Consequences:

- Reluctance in self appraisal may hinder chance to improve and adapt for faculties.
- Feedback not being used as tool for motivation and incentives may discourage faculties from making further improvements.

RESEARCH, CONSULTANCY AND EXTENSION

Objectives/targets

SoE aims at developing a culture of research practices among faculty and students. School intends to generate research funds from both national and international funding agencies. Research activities with school's own initiations are also encouraged. Graduate and PhD students enrolled in different departments are intended to be involved in core research activities. School, intends to engage students and faculty members in extension activities including product development, business incubation and disseminating the technologies to the communities and industries.

Current status

Research is considered as integral part of the engineering education at all levels. Undergraduate students are involved in projects aiming to system development, integration and performance analysis. Graduate and PhD students are involved in high standard core technical research activities as a part to develop their thesis. Most of the teaching staffs are also engaged in research activities. School currently has enrolled several PhD, MS by research and ME students. Every department is running one or more research projects.

Several projects running in the school are funded by international funding agencies, while several are being supported by UGC and Energize Nepal project with secretariat at Kathmandu University. The school shares the Research Development and Consultancy unit with the school of science. RDC has developed clear guidelines for conducting research activities and handling research projects. RDC manages, coordinated and supports all the research projects in the school. Many research projects and activities are being conducted as joint efforts with international universities and industries.

School has observed a regular and encouraging list of journal publications and conference presentations from faculties and students in recent years. The school itself publishes a online journal named KUSET.

Students and faculties are involved in various extension activities. Community education and outreach is a strong legacy at SoE. Several projects aiming to product development and business ideas are also in progress. Students usually through clubs also involve in training in disaster management, medical camps, health/environment awareness programs, and blood donation.

Fulfillment analysis

RDC has been enacted and it has developed several policies and procedures to facilitate and regulate research activities. Faculties can also involve in consultancy services as directed by RDC guidelines. Research committee of the school is responsible for assessing quality of the research. School has declared financial support for conference participation and paper publication. Publications are considered as important factor during the evaluation of faculties in upgrading and promotion. The school has signed MOU with many international organizations and universities to promote research cooperation, funding support and capacity building mobility.

Best practices

Best practices in the school include:

- Faculties and students are encouraged to participate in research activities; school motivates them with financial support in conference presentation and paper publication.
- Research projects recruit paid research assistants (RA). MS and PhD students are given priority while recruiting as RA.
- Research projects are managed under clear and well documented guidelines of RDC.
- Extension and community reach activities are also supported through projects that support business incubation and community development.
- School also supports community and social activities through Student Welfare Directorate (SWD).

Critical appraisal

Although school promotes research, and a number of projects are ongoing, it has not been able to financially support research projects from its own funds. The school needs to allocate funds by

itself to support research activities. RDC guidelines are developed and implemented to regulate research activities; however several difficulties have been reported while following. The guidelines need to be reformed and revised. RDC needs to support the faculties in proposal preparation, streamlining the research priorities and reducing redundancy.

Efforts made

School has been supporting faculties in getting research funding from different external (national and international) agencies. For faculty development school has been providing higher studies opportunities within and outside institution. RDC policy has been drafted and faculty members and scholars are encouraged to get involved in research and consultancy activities. The school also has promoted the formation of different specialized research centers including turbine testing labs, natural language lab, lighting lab etc.

SWOC analysis

Strength:

- Good research environment

Opportunity:

- Good environment and school policy to promote research may lead to larger number of research projects and activities.
- Financial support for conference may lead more research publications and networking, leading to more research collaborations.
- RDC may be used to develop a healthy research environment

Consequences:

- Lack of research in certain disciplines may de-motivate faculties in those areas.
- Lack of formation of research groups may lead to redundancy and hinders specialization.
- Complicated guidelines and cumbersome procedures may result in delays and cause failure of project implementation leading to de-motivation towards research and dissatisfaction of funding agencies.

INFRASTRUCTURE AND LEARNING RESOURCES

Objectives/targets

SoE aims at providing adequate infrastructure and resources for effective implementation of teaching learning activities of its academic programs. The school infrastructure is the part of university master plan from the beginning. The school targets to expand the infrastructure as per master plan of the University with its growth. The available infrastructure/resources are expected to be in proper working condition and of acceptable quality. School aims at optimum utilization of available infrastructure and resources by students, faculty members and staffs. School focuses on making each department of the school self sufficient in terms of resources and infrastructure.

Current status

The current infrastructure of the school is according to that stated in master plan of the university except from small needful adaptations. The school has its own buildings for carrying out academic

and administrative activities. The buildings house dean's offices, school administration, departments, lecture rooms, computer and other dedicated laboratories, office space for faculties and researches etc. The school shares other common physical infrastructures with school of science and the central campus. The shared facilities include the auditorium, central library, boy's and girl's hostel, faculty residences, canteen, café, transportation fleet, medical center, bank and counseling center etc. The school is continuously expanding the infrastructure to meet the requirements of its growing number of students.

The laboratory are furnished and equipped with quality equipments and apparatuses. They are being continuously updated and maintained. The school has also established state of art laboratories as for specialized objectives and research. These include turbine testing laboratory, high voltage laboratory, technical training center etc. The school in association with the university is also in planning and development phase to establish multidisciplinary research center called NTIC with support from KOICA. The centers provide service not only to the school but also for external researchers and the industries.

The school is trying to make the optimum utilization of the existing resources. It shares many resources with central campus. Even within the school, several departments make the use of facilities in close cooperation. Several facilities are made available to be used by external agencies also. Physical infrastructures and facilities are managed and maintained by the physical facility section and CED of the university. Laboratory and other teaching learning resources are maintained by the school administration. The school has the dedicated human resources team to clean the respected area and the buildings. The school area is pollution free, green and quiet. Toilets are adequate, clean and hygienic with continuous running water and soap. High quality drinking water is provided free to all students and is produced at own water processing facility within the premises. Water quality is checked regularly.

Computers are adequate and are easily accessible to the students. Departments have their own computer labs as well as many departments maintain additional open labs with internet connectivity all the times. Such labs are managed by the students themselves. All faculties and teachers are provided their own cabin with separate computers. Computers are connected with broadband internet through ethernet cables. Free wifi is also available within the school premises for everyone. Most of the areas of the school are secured with CCTV surveillance.

Health facility for the students is provided through compulsory insurance schemes with the Kathmandu University Teaching Hospital (Dhulikhel Hospital). Optional insurance plans are also provided to the faculties and the staffs. School also maintains first aid kits, doctor's visit and counseling service. The school shares sports facilities including indoor hall and football ground with central campus. Sport events are organized through student's clubs with support from SWD. The school shares a central library facility with the central campus. The library is well serviced with books, periodicals and journals. Library is accessible 12 hours a day. Students can also get access to library resources through Kathmandu University Central Library (KUCL) Online Public Access Catalogue (OPAC). To automate library system, central library is using Software for University Libraries (SOUL). Several departments also maintain a small departmental library particularly focused on academic journals and publications.

Fulfillment analysis

The school has just been able to manage the expansion of its infrastructure with its growing students. Several departments have difficulty in maintaining enough classrooms. Although intended all classrooms are not furnished with multimedia projectors and computers. Although the school has well furnished labs, it lacks spaces for further expansion of laboratories and establishment of new laboratories. 24-7 free internet is available; however it is struggling to provide enough speed. Hostel facility is not enough for all students.

Best practices

Best practices of the school include:

- School follows the master plan for its expansion.
- Separate and maintained computer and other labs for each department.

- Computers and separate office space to all faculties.
- Broadband internet through cable and wifi to all 24-7.
- Own hygienic and affordable canteen serving meals to all.
- Health service through insurance.
- Free drinking water produced at own processing facility.
- Resource sharing for optimization.

Critical appraisal

The school must increase its infrastructure in more rapid pace to cope with its expansion. Laboratory equipments and other teaching resources must be maintained at regular schedule. Preventive maintenance system must be in place to ensure smooth running of the activities. CCTV cameras installed are not enough and all are not functioning. Some of the facilities are underutilized. Sports activities need to be encouraged more with recognition (incentive). Student must be expanded.

Efforts made

School has been continuously expanding its infrastructure and resources to address need of students and enhance institution quality. Library and laboratories are upgraded in timely manner. Laboratories are established within school premises so that students can get engaged in practical exercise. New buildings have been added. Canteen facility has been upgraded. Lecture rooms are provided with dedicated projectors. Toilets have been improved.

STUDENT SUPPORT AND GUIDANCE

SWOC analysis

Strength:

- Defined master plan.
- Well equipped labs, spacious lecture rooms.
- Resource sharing resulting to optimization.
- Enough computers and internet access.

Weakness:

- Struggling to meet infrastructure need for expansion.
- No efficient maintenance schedule and no preventive maintenance.
- No recognition for sports and other extracurricular talents.

Opportunity:

- Expansion based on master plan.
- Student's satisfaction with involvement in labs and gaining skills.
- Student's satisfaction with good connectivity.

Consequences:

- Degrade in quality if infrastructure expansion not coping with increase of students.
- Hindrances in teaching learning leading to disruption of calendar if proper maintenance of facilities not done.
- Exceptional sports and other talents may be reluctant to join the school.

Objectives/targets**Objectives/targets**

School aims at providing support for students' overall development. School intends to provide updated academic information to enrolled students and potential students. School aims at providing assistance in terms of scholarship to needy and meritorious students. Personal and career counseling is provided to students. School also intends to play vital role in graduates' placement by linking students to different organization.

Current status

The school has been working to provide adequate academic and other supports to the students. The school has been able to reduce the student dropout rate of school in last several years. A high percentage of students appear for regular exams. Detail tracer study of school has not been conducted, but the employment rate has been significantly high. School graduates are working in government, non-government, private sector, utility companies and international organization. Each department has a dedicated internship supervisor that works for linking the students to the prospective employers primarily for internship opportunities.

School publishes its prospectus every year. The information is also updated regularly in the school website. Students are provided with various scholarship schemes, scholarship for needy and meritorious student, educational loan, graduate assistance, scholarship for staff/staff family members, and scholarship for locals whose have contributed their land for infrastructure development of the university. In addition to this school also have differ project based scholarships.

Faculty members are engaged in academic and personal counseling, and also help in linking students with different industries. The school also shares a counseling unit to guide or mentor the students in personal matters. The school shares the student welfare directorate (SWD) along with the school of science. SWD is a separate unit in central campus to regulate, facilitate and support student's affairs. The school does not have a single alumni association. However each department maintains their own informal alumni community through social media groups.

To attract international students, school offers services like special accommodation in "International Guest House", support during visa process. To facilitate all round personality development of student's school provides recreational facilities like indoor/outdoor games, cultural program, and different theme based clubs.

Fulfillment analysis

School has been able to provide timely and accurate information to students. Students are properly oriented about admission process, policy of the institution, and code of conduct. Financial support and personal counseling is provided to needy student. A separate placement does not exist in school, for better placement of graduates it will be good to have a placement cell. Placement cell will also facilitate in keeping proper database of graduates activities.

Best practices

Best practices of the school include:

- Provision of student welfare council and student welfare directorate to look after student affairs.
- Updated information in public domain, transparent admission process, student orientation.
- Publication of updated brochures annually during admission.
- Financial aids in the form of need based scholarships, merit based scholarships and loans.
- Scholarships to staff/family members, local community and quota reservation to different communities.
- Well documented scholarship policy.
- Faculties acting as academic counsellor.
- Internship co-coordinator in each department.

Critical appraisal

Graduates of school are working in influential post in different organization, but in absence of tracer study it's difficult to clearly state the number. Alumni of the departments exist only in the informal form. It is better to have a formal alumni association. Departments assign internship coordinators, however it is better to have a separate employment and placement cell to facilitate graduate recruitments. Looking into current number of foreign students, maintaining separate office to look after affairs related to foreign students look difficult. However, assigning some faculties to correspond to foreign students and potential students looks sensible. The counseling unit although exists, is not very active. It needs to be made active and more accessible. Although there is provision for SWC as student's body, there have been hurdles in making it functional. It needs to be made functional.

SWOC analysis

Strength:

- Financial aids available.
- Faculties work as career counselor.
- School wise and departmental orientation practiced.
- Provision of internship advisor.
- Admission call transparent and fair.
- Provision of SWC and SWD.

Weakness:

- Financial support not enough.
- No separate career counseling unit.
- No separate placement unit.
- No separately assigned personnel for foreign student's affairs.
- SWC not active.

Opportunity:

- Affordable even for needy students.
- Internship can be taken as first step towards employment.
- Active student's body can be vital in solving student matters and providing guidance.
- Formal and active alumni can be vial in career guidance to fresh graduates.

Consequences:

- Without tracer survey alumni cannot be formally recorded.
- Inactive student's body may lead to interferences and promote groupism.
- Lack of specific contact person may lead to absence of foreign students.

INFORMATION SYSTEM

Objectives/targets

School aims at having a proper database of students. The purpose is to generate needed information quickly and in accurate manner. Intention behind maintaining database is to generate analysis regarding student academic status, diversity, and composition.

Current status

The information of the students and the academic activities are maintained at different sections. The central registration section maintains and analyses the record of the students enrolled in different programs. The summary of the information is also recorded by the school administration and concerned departments. The records of student's final examinations are maintained at the office of controller of examinations. Concerned departments maintain the summary of final performances as well as details of internal evaluations and attendances. The departments also maintain records of other aspects including behavioral aspects.

The information is maintained both in soft copies (spread sheets as well as database in information system in dedicated servers) and hard copies (printed mark sheets, summary sheets etc). Information not confidential can be obtained on demand. Many data are available online (including grade sheets). Annual reports also disclose important data.

Fulfillment analysis

Database of students is properly maintained by examination center and dean office/departments. But database are not kept in user friendly manner. Although data are maintained in electronic version, a proper analysis cannot be generated regarding student diversity from the available data. Gender analysis has been focused but classification on basis of ethnicity has not been done. The school does not maintain its independent information system.

Best practices

Best practices of the school include:

- Database maintained in both hard copies and soft copies.
- Information system in dedicated servers (secured) is implemented.
- Stakeholders are made data available on demand.

Critical appraisal

Database is maintained in a secured examination server. The school does not maintain its own database. Only summary of the data are recorded. A systematic system needs to be introduced, where student's details are kept and a report can be generated easily.

Efforts made

Although the school does not have its own information system, each department has started to maintain their own records. In addition the departmental sections in the website maintain the academic information about student's projects, assignments, lab manuals etc.

SWOC analysis

Strength:

- Secured database and information system.
- Records in both soft copies and hard copies.
- Information available in websites.

Weakness:

- School does not have separate Information system
- Data are not periodically analyzed.
- Analysis date rarely used in decision making.

Opportunity:

- Central database makes data safe and reduce costs.

Consequences:

- Without own information system obtaining particular information takes long time and hassles.

PUBLIC INFORMATION

Objectives/targets

School aims at effective dissemination of information to concerned stakeholders. School has a well updated website through which information is circulated.

Current status

School website is timely updated and is the main source of information. Information related to events, course details, school activities, student's life, admission procedure, faculty details, and vacancy are placed in website. School reception and administrative department is playing a vital role in public information. Interested people can directly contact reception or school administration to get necessary information.

University publishes annual report consisting details of university academic progress, financial activities, and administrative activities. Annual report is published in end of fiscal year and is accessible to interested people. Administrative information related to vacancy and contract opportunities are published in newspaper, whereas financial report is published in annual report only.

School manual and course brochures are published every year and distributed to interested students/people. Manual and brochures can be collected from university premises or downloaded from website. Information System Management System (ISMS) has been established with an objective of making it an information hub in future. ISMS also look after computer maintenance. Stakeholders provide feedback and share their views in different meeting or via email. General public can also give feedback or suggestion via email.

Fulfillment analysis

To provide latest information website is updated in timely manner. ISMS has been effective in maintaining computers and backup support, but not as an information hub. Strengthening ISMS is needed. No separate public information cell is established in the school. To ensure proper flow

of information if possible a separate public information cell needs to be made or have a designated person to look after public information.

Best practices

School updates its website in timely manner, so interested people can get all needed information from website itself. Notices regarding academic enrollment and vacancies are published in national daily and posted in website. School publishes its prospectus and course brochures every year making needed changes from previous year. Annual report is published and made available to interested stakeholders.

Critical appraisal

School does not have a separate public information cell. Having a separate information cell would have facilitated dissemination of information from one source. At present school website is the major source of information.

Efforts made

School has made an effort to maintain a well updated website, so that both national and international potential students can have access to necessary information. School publishes updated manual and course brochures annually. School collects received feedback and takes action whenever necessary.

SWOC analysis

Strength:

- Periodically updated websites.
- Information available in websites.
- Periodically published newsletters and annual reports.

Weakness:

- School does not have its own public information unit or assigned personnel.

Opportunity:

- Major information is available in websites and publicly made aware in annual reports.

Consequences:

- Without its own public information cell or information officer, public trust may not be gained.

Section - III

Summary:

Kathmandu University (KU) is an autonomous, not-for-profit, non-government institution dedicated to maintain high standards of academic excellence. It is committed to develop leaders in professional areas through quality education. Within a period of 27 years of establishment, KU has not only built reasonable infrastructure, but also established a track record of academic excellence. The vision of Kathmandu University is to become a world-class university dedicated in bringing knowledge and technology to the service of mankind and its mission is to provide quality education for leadership. The University is running its program through 7 different schools.

School of Engineering is one of the prominent schools of Kathmandu University (KU). VMGO of SOE is in line with that of KU. The School of Engineering (SoE) at Kathmandu University was established in 1994 with the aim to produce quality engineers in the country. During its establishment SOE focused on those areas where other universities did not offer any programs. School of Engineering, Kathmandu University is running its program within the umbrella of the vision and mission of Kathmandu University together with six other schools.

The University Grants Commission (UGC) has launched the Quality Assurance and Accreditation (QAA) programme, as an important aspect of reforming higher education in Nepal. Accordingly, a Quality Assurance and Accreditation Committee (QAAC) has been formed for the development and implementation of QAA activities in higher education in Nepal. The QAA Division in UGC has been established to facilitate QAAC and to perform activities related to QAA.

With the objectives of improving quality of education and other services, the School of Engineering has decided to quality accreditation from UGC and got the accreditation on 2013 for five years. SoE has again submitted the Letter of Intent (LoI) to UGC on 27 August 2019 in order to participate in the process of re-accreditation process. SoE has realized the importance of quality in its services and has been including the components of qualities to improve the quality of education. However, developing a quality culture in Nepalese context is still a challenge. Several initiatives in form of informal academic audits are carried out to monitor the academic quality. SoE strictly adheres and abides by the instructions and suggestions from Nepal Engineering Council.

After obtaining the Letter of Intent (LoI), the School of Engineering has formed a Self-Assessment Team (SAT) on 26 December 2018. The overall progress in each and every aspect of the school initiated and led by the Internal Quality Assurance Accreditation Cell (IQAAC) in support with the dean, the associate dean, administrative staffs, department heads, faculties, students and cell functioning at the SoE has been significant in the academic journey of the school.

The Self Study Report (SSR) was a great learning and self-assessment process for the school. During the process of preparation of SSR, school came to realize its strengths and was able to identify many areas for improvements. SSR preparation also helped school to analyze its current status and future prospects. During preparation of SSR, team learned strengths and weaknesses of the school. SSR is the result of combined effort of various stakeholders. Various meetings and discussion have been held to facilitate SSR and inform stakeholders about QAA system. Interaction programs with faculty members, staffs, student representatives, and IQAAC have been conducted. Concerned stakeholders have been actively engaged in preparation of SSR, by providing information or working for preparation of documents. Following strengths and areas of improvements has been identified by the school during SSR process.

Strengths:

- Clearly defined vision, mission, goals, and objectives.

- Well-developed policy and procedures.
- Established brand name (recognized in national and international level).
- Degree recognized by many international university (opportunity for credit transfer for students)
- Competitive courses offered meeting both national and international standard.
- Operates in planned way following strategic plan and annual plan.
- Different organizational structure in place to work in specified areas.
- Competitive graduates.
- Group of qualified professional as faculty members.
- Students from diverse background selected through systematic selection process.
- Curriculum designed as per international standards.
- Adequate infrastructure.
- Decision making through team work.
- Students actively involved in decision making process through representation in committees.
- School activities guided by University Act.
- Transparency in management and operations.
- Graduates working in national and international level organization.
- Different research project funding by external agencies (national and international).
- Focus on research work.
- Research scholars enrolled in PhD and MS by Research.
- Updated and well maintained website.
- Activities in accordance to vision, mission, and goal of school.
- Practical based teaching approach which gives a competitive edge to our graduates.
- Involvement of national and international expert for school overall development.
- National and international exposure to faculty members for all round development.
- Student exchange programs to provide international exposure to students.
- Strong linkage with various national and international organizations for academic collaboration.

Areas for improvement

- Various forms and formats are developed (course evaluation, performance appraisal); however, implementation is lacking.
- Separate public information cell to ensure communication to public is effective.
- Scope for establishing placement cell and appointment of placement officer.
- Encourage students to be active in literary and artistic activities.
- Need to instill the culture of sharing of information.
- Develop plan for optimum utilization of existing infrastructure.
- Make existing database more user- friendly