



School of Engineering
Undergraduate Program Information
2016

Engineering is a learned and earned profession, with continuous analysis and rigorous practice. Engineering has a crucial direct impact on the quality of life and environment. Engineers should therefore always maintain the highest possible standards of quality, honesty and integrity.



A Brief History of KU

As a precursor to the establishment of a University, a team of dedicated people first established Kathmandu Valley Campus in 1985 to provide education in Intermediate of Science (I. Sc.). The same team proposed the establishment of Kathmandu University. After thorough discussion on the proposal in the Parliament, Kathmandu University was established by an Act of Parliament on December 11, 1991.

Some Important Milestones for School of Engineering

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| 1985: Establishment of Kathmandu Valley Campus with academic affiliation with Tribhuvan University; | 2006: First MS by Research graduate in School of Engineering in Electrical and Electronics Engineering; |
| 1991: Establishment of Kathmandu University under an Act of Parliament; | 2007: Launched four-year Bachelor of Engineering program in Geomatics Engineering in collaboration with Land Management Training Center; |
| 1991: First Senate Meeting presided by the Prime Minister and Chancellor of Kathmandu University, Mr. Girija Prasad Koirala; Appointment of Dr. Suresh Raj Sharma as the Vice Chancellor of the University; | 2009: Launched four-year Bachelor of Engineering program in Civil Engineering with specialization in hydropower; |
| 1992: Appointment of Dr. Sitaram Adhikary as the Registrar; | 2009: Start of RenewableNepal Programme for research-based industrial development from Norwegian grant support from NORAD; |
| 1992: Appointment of Dr. Bhadra Man Tuladhar as the Dean of School of Science: Launching of Kathmandu University's own Intermediate of Science Program; | 2010: Inauguration of Prof. Inge Johansen Engineering Block in Dhulikhel by Norwegian Minister and Nepalese Minister; |
| 1994: First Faculty Board Meeting of School of Engineering; Mr. Suresh Kumar Pudasaini appointed as Program Director | 2011: Launched international ENPE Master Program in Planning and Operation of Energy System in collaboration with NTNU; |
| 1994: Engineering Education Project supported by Norwegian Himal Asia Mission (NHAM); Started four-year bachelor courses in Mechanical, Electrical & Electronics, and Computer Engineering; | 2011: Turbine Testing Laboratory Established in the Department of Mechanical Engineering |
| 1995: Inauguration of the University at Dhulikhel by HRH Crown Prince Dipendra Bir Bikram Shah Dev; | 2012: Prof. Dr. Ram Kantha Makaju Shrestha appointed as the Vice Chancellor |
| 1996: Prof. B. L. Anantharamu appointed as Dean of School of Engineering | 2013: Prof. Dr. Bhola Thapa appointed as the Registrar |
| 1998: First batch of BE students graduated, 7 in Computer Engineering, 22 in Mechanical Engineering and 38 in Electrical Engineering. | 2013: Started Master Program in Land Administration |
| 2000: Inauguration of Girls' Hostel by Rt. Honorable Prime Minister and the Chancellor of Kathmandu University, Mr. Girija Prasad Koirala. | 2013: First PhD graduate in School of Engineering in Mechanical Engineering; first batch of graduates from Master in Planning and Operation of Energy System, 3 from Zambia and 6 from Nepal; |
| 1999: Prof. Dr. Bhadra Man Tuladhar appointed as Dean of School of Engineering | 2014: Prof. Ramesh Kumar Maskey and Prof. Bim Prasad Shrestha appointed as Associate Deans of School of Engineering |
| 2001: Launched graduate programs in Information Technology, Communication Engineering, and Mechanical Engineering; | 2014: First PhD graduate in Civil Engineering |
| 2002: Prof. Dinesh Chapagain appointed as Dean of School of Engineering | 2014: Technical Training Center established with grant and technical assistance from Korean Government (KOICA) |
| 2003: First batch of Master of Engineering in Communication Engineering, Mechanical Engineering, and M. Tech in IT graduated. | 2015: Two PhD graduates in Computer Engineering; First batch of graduates in Masters in Land Administration |
| 2004: Started international Master of Engineering in Electrical Power Engineering in collaboration with NTNU (NORAD Fellowship Program); later continued as NOMA and ENPE program with Norwegian support. | 2015: Launched Bachelor of Chemical Engineering Program; Launched Master of Engineering in Structural Engineering Program, Introduced 4 sub-divisions in Mechanical Engineering |
| 2005: High voltage laboratory established | 2016: Prof. Dr. Bhupendra B. Chhetri appointed as Dean of School of Engineering |
| 2005: Prof. Bhola Thapa appointed as Dean of School of Engineering | 2016: Agreement for Energize Nepal project signed between KU and Ministry of Foreign Affairs Norway |
| 2005: First batch of students from ME in Electrical Power Engineering graduated, 2 students from Bangladesh, 1 from Indonesia, 1 from Sri Lanka, 1 from Zambia, and 4 from Nepal; | |

By 2015, School of Engineering has produced 4 PhD, 181 Masters, and 2192 Bachelor of Engineering graduates.

Undergraduate Programs of School of Engineering

The school has following undergraduate programs. Some specific information about departments and BE course structure are given in specified pages.

4 Year Degree Program (Course Fee* NRs. 650,000)

Program (Specialization)	Intake	Page
BE in Electrical and Electronic Engineering (Communication)	30	2
BE in Electrical and Electronic Engineering (Power and Control)	30	4
BE in Mechanical Engineering (Automobile)	30	6
BE in Mechanical Engineering (Design and Manufacturing)	30	8
BE in Mechanical Engineering (Energy Technology)	30	10
BE in Mechanical Engineering (Hydropower)	30	12
BE in Computer Engineering	60	14
BE in Civil Engineering (Specialization in Hydropower)	60	18
BE in Geomatics Engineering	30	20
BE in Chemical Engineering	30	24

5 Year Degree Program (Course Fee* NRs. 750,000 tentative)

Program	Intake	Page
B. Arch Bachelor of Architecture (to be started in near future)	30	22

*Fee indicated is for ordinary Nepali students, for sponsored students fee is 1.5 times the regular fee. Students need to pay NRs. 118,000 at the time of admission and rest of the fee is needed to be paid in two installments per semester.

The School also manages the following programs of other schools of KU.

1. BSc in Computer Science, program of School of Science, managed by Department of Computer Science and Engineering. (Page-16)
2. BBIS, program of School of Management, managed by Humanities and Management Unit (Page-26).

For admission to the above 2 programs, respective Schools and Departments should be consulted.

The School cooperates with Land Management Training Centre (LMTC) of GoN for Geomatics Engineering and Diploma in Geomatics Engineering program of LMTC.

Admission Procedure in Brief for Undergraduate Programs

In order to be fully eligible for admission, students must have passed 10+2 or equivalent with minimum 50% marks in aggregate and 50% aggregate marks in Physics, Chemistry (or Computer Science for some programs), and Mathematics. Provisional application can also be made by students awaiting the result of +2. All candidates need to take admission test KUCAT CBT for Physics, Chemistry, and Mathematics. The enrolment is based on the merit of admission test result.

General procedure:

1. Know about programs and decide on program you wish to apply
2. Know in advance about KUCAT CBT and the syllabus for test
3. Notice the call for admission or admission test (KUCAT)
4. Apply online application form
5. Take appointment for KUCAT CBT with valid Photo ID (Citizenship, Passport, License, or Other Issued by National Authority) and collect admit card for test
6. Appear in the test on the date and time of appointment
7. See your rank in CBT result of the batch, change your program option if desired, wait for the admission notice
8. If selected for admission, get documents verified, pay admission fee (NRs. 118,000), fill admission form and registration form, and get admitted.

For details of admission and for knowing more about KU, visit KU website

www.ku.edu.np

Learning and Academic Performance Evaluation

KU was a pioneer to introduce engineering projects from the very first year of UG curriculum. Hence, emphasis of KU on problem & practice based learning is evident. Over the years the curriculum has evolved introducing more intensive field work, internship, project works, community-based learning, etc., so that students have more practical learning environment. Academic life could be very demanding at KU but the fruit of learning with rigorous approach is evident as KU graduates are accepted worldwide.

Academic performance of students is evaluated with rigorous in-semester and end-semester evaluations. Grading of student performance is done in a 4 point grading system with a grading system that awards grades in the range A(4.0), A-(3.7), B+(3.3), B(3), B-(2.7), C+(2.3), C(2.0), C-(1.7), and D(1.0). Cumulative Grade Point Average (CGPA) at any stage of study is one of the means for indicating student performance and scholastic achievement during the course of study.

Bachelor of Engineering in Electrical and Electronics Engineering with Specialization in Communications Engineering

1. Why Electrical and Electronics (Communication) Engineering?

- Department of Electrical and Electronics is an ideal place in Nepal to pursue your interest in technology in compliance with the society.
- Living organisms communicate with each other to share and express their thoughts, ideas, and to be visible in the society.
- As a typical example of communication engineering, watching live football match in a mobile device with very low latency and in high quality seems simple. But all it requires is dedication and perseverance of a communication engineer; to make the video taken by a camera ready to transmit ON AIR, receive the exact replica of transmitted information, process it and display on the user device.
- Real communication engineers interface the science with the society so they are always of high demand in the society.

2. Where are the Career Opportunities?

- Communication Sector: Radio, Television, Internet Service Provider, Telephone Service Provider
- Telecom Industries
- Academic Institutions and Research Center

3. Objectives of the Department

- To produce self-motivated, confident and creative graduates of highest quality with entrepreneurial attitude.
- To collaborate with industries and institutions to develop skilled engineers.
- To become a centre of excellence in electrical and electronics engineering education and research

4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry, and mathematics (PCM); at least pass the PCM admission test (KUCAT).

5. Financial Aid and Scholarship

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact the Department for other department specific scholarship provisions.

6. Exchange Program and Internship

Final year students are sent in various industries matching the interest of the student, department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Furthermore, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.

Outstanding students may get opportunities to study some courses or complete semester at its partner universities abroad subject to availability of student exchange programs. This activity introduces students with culture and history of another country and at the same time provides opportunity to learn in an international educational environment.



7. Students' Club

Society of Electrical and Electronics Engineers (SEEE) was established in 2000 AD. SEEE represents the students of the Department and is involved in improving learning environment and the welfare of the students in the Department. It conducts social welfare activities and helps improve interaction among students at the Department. It publishes Encipher Magazine annually and also publishes Tech Briefs frequently. It also organizes training for students in specific skills, quizzes, and project competitions.



For more detail: <http://www.ku.edu.np/ee>

Year Sem. **Curriculum Outline for BE in Electrical and Electronics Engineering with Specialization in Communications Engineering (Total Credit: 150)** **Credit**

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 207 Differential Equations and Complex Variables [4]	EEEG 202 Digital Logic [3]	EEEG 207 Electrical Engineering Materials [3]	EEEG 211 Electronics Engineering I [3]	EEEG 213 Network Analysis [3]	EEEG 217 Digital Electronics Laboratory Work [1]	EEEG 218 Analog Electronics Laboratory Work [1]	EEEG 205 Engineering Project [1]	19
	II	MATH 208 Statistics and Probability [3]	MCSC 202 Numerical Methods [3]	COMP 201 Computer Architecture & Organization [3]	EEEG 214 Electronics Engineering II [3]	EEEG 215 Electrical Machines Fundamentals [3]	EEEG 219 Electrical Machines Laboratory [1]	EEEG 220 Electronics and Analog Filter Design Laboratory [1]	EEEG 212 Engineering Project [2]	19
III	I	MGTS 301 Engineering Economics [3]	COEG 304 Instrumentation and Control [3]	EEEG 313 Signals and Systems [3]	EEEG 314 Microprocessors [3]	ETEG 302 Analog Communications [3]	EEEG 306 Instrumentation and Microprocessor Laboratory [1]	ETEG 307 Analog Communications Laboratory [1]	ETEG 313 Engineering Project [1]	18
	II	EPEG 301 Power Apparatus and Systems [3]	EEEG 309 Electromagnetic Fields and Waves [3]	ETEG 303 Data Communication & Networks [3]	ETEG 304 Digital Communications [3]	ETEG 305 Digital Signal Processing [3]		ETEG 308 Communications and Signal Processing Laboratory [1]	ETEG 319 Engineering Project [2]	18
IV	I	MGTS 403 Engineering Management [3]	ETEG 402 Antennas and Propagation [3]	ETEG 408 Microwave Devices & Systems [3]	ETEG 422 Optical Fiber Communication [3]	**** ** Elective I [3]		ETEG 403 Communications Laboratory [1]	ETEG 419 Engineering Project [2]	18
	II	MGTS 402 Engineering Entrepreneurship [3]	ETEG 417 Digital Switching and Tele-Traffic Engineering [3]	ETEG 432 Wireless Communications [3]	**** ** Elective II [3]		ETEG405 Communications Laboratory [1]	ETEG 436 Industrial Internship [2]	ETEG 435 Engineering Project [3]	18

*** **List of Electives** (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
ETEG 425	Neural Network and Fuzzy Logic	ETEG 428	Genetic Algorithms	ETEG 431	Digital Circuits and Systems Design
ETEG 426	Very Large Scale Integrated Circuits	ETEG 429	Cellular Mobile Communication	ETEG 433	Wireless Networks
ETEG 427	Satellite Communication and Broadcasting	ETEG 430	Communication Systems and Noise	ETEG 434	Statistical Signal Processing

Bachelor of Engineering in Electrical and Electronics

Engineering with Specialization in Power and Control Engineering

1. Why Electrical and Electronics (Power and Control) Engineering?

- Department of Electrical and Electronics is an ideal place in Nepal to pursue your interest in technology in compliance with the society.
- To meet the energy need of the society in an environmentally friendly and economic way through the use of conventional and alternative technologies is always a challenge and a person who can accept this challenge is highly respected in the society.
- As a typical example of power and control engineering, high quality and low cost power transmission from Kaligandaki Hydro Power to your house seems simple. But all it requires is dedication and perseverance of a power and control engineer; to generate the electricity from running water, transmit the generated power with low loss, and distribute the power as required by the user.
- Power and control engineering interfaces mathematics and physics to the generation and control of the electricity.

2. Where are the Career Opportunities?

- Power Sector:
Electricity Utilities,
Hydropower Stations
- Renewable Energy
- Industries: Process and
Manufacturing
Industries,
- Hotels and Large
Building
- Academic Institutions
and Research Centres



3. Objectives of the Department

- To produce self-motivated, confident and creative graduates of highest quality with entrepreneurial attitude.
- To collaborate with industries and institutions to develop skilled engineers.
- To become a centre of excellence in electrical and electronics engineering education and research

4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry, and mathematics (PCM); at least pass the PCM admission test (KUCAT).

5. Financial Aid and Scholarship

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact the Department for other department-specific scholarship provisions.

6. Exchange Program and Internship

The exchange program and internship provision of the Department are as described in the Communications Engineering program.

7. Students' Club

The student club is SEEE, same as described in the communications engineering program of the Department.



High Voltage Laboratory

For more detail: <http://www.ku.edu.np/ee>

Year Sem. **Curriculum Outline for BE in Electrical and Electronics Engineering with Specialization in Power and Control Engineering (Total Credit: 150)** **Credit**

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 207 Differential Equations and Complex Variables [4]	EEEE 202 Digital Logic [3]	EEEE 207 Electrical Engineering Materials [3]	EEEE 211 Electronics Engineering I [3]	EEEE 213 Network Analysis [3]	EEEE 217 Digital Electronics Laboratory [1]	EEEE 218 Analog Electronics Laboratory [1]	EEEE 205 Engineering Project [1]	19
	II	MATH 208 Statistics and Probability [3]	MCSC 202 Numerical Methods [3]	COMP 201 Computer Architecture & Organization [3]	EEEE 214 Electronics Engineering II [3]	EEEE 215 Electrical Machines Fundamentals [3]	EEEE 219 Electrical Machines Laboratory [1]	EEEE 220 Electronics and Analog Filter Design Laboratory [1]	EEEE 212 Engineering Project [2]	19
III	I	MGTS 301 Engineering Economics [3]	EEEE 313 Signals and Systems [3]	EEEE 314 Microprocessors [3]	EPEG 302 Advanced Electrical Machinery [3]	EPEG 317 Measurement and Instrumentation [3]	EEEE 306 Instrumentation and Microprocessor Laboratory [1]	EPEG 307 Advanced Electrical Machinery Laboratory [1]	PCEG 313 Engineering Project [1]	18
	II	EPEG 301 Communication Systems [3]	EEEE 309 Electromagnetic Fields and Waves [3]	COEG 301 Control Engineering [3]	EPEG 315 Power Systems I [3]	EPEG 318 Power Electronics [3]		PCEG 308 Power and Control Laboratory [1]	PCEG 319 Engineering Project [2]	18
IV	I	MGTS 403 Engineering Management [3]	COEG 401 Control Systems Design [3]	EPEG 413 Power Systems II [3]	EPEG 422 Solid State Drives [3]	**** * Elective I [3]		PCEG 403 Power and Control Laboratory [1]	PCEG 404 Engineering Project [2]	18
	II	MGTS 402 Engineering Entrepreneurship [3]	COEG 402 Computer Based Control [3]	EPEG 415 Switchgear and Protection [3]	**** * Elective II [3]		PCEG405 Power and Control Laboratory [1]	PCEG 436 Industrial Internship [2]	PCEG 435 Engineering Project [3]	18

*** **List of Electives** (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
COEG 411	Servomechanisms	EPEG 408	Industrial Electronics	EPEG 416	Industrial Electrification
COEG 418	Real Time Programming	EPEG 409	High Voltage Engineering	EPEG 417	Flexible AC Transmission Systems
COEG 419	Multivariable Control System	EPEG 410	Hydropower and Renewable Energy	EPEG 418	Energy Efficient Lighting and Renewable Energy
EPEG 406	Transmission and Distribution	EPEG 411	Power System Planning and Operation	EPEG 421	Power Transmission System Design
EPEG 407	Instrumentation Systems	EPEG 414	Solid State Lighting		

Bachelor of Engineering in Mechanical Engineering (Automobile)

Automobile in Mechanical Engineering is synonymous with creativity and innovation to adopt modern automobile technology. With the skill ranging from mechanical design, electronic systems, manufacturing techniques and management, Automobile engineering is increasing globally in its outlook and multidisciplinary operation to learn about transport efficiency, sustainability issues and vehicle systems diagnosis. Automobile will play a role in solving the energy crisis through the creation of hybrid vehicles and other related technology on a global level. Automobile looks at ways to enable vehicle to vehicle and vehicle to infrastructure communication to increase safety and security in new forms of transport.



Automobile Laboratory and Workshop

1. Why Automobile?

- For designing, developing, repairing, resting, manufacturing and servicing to improve existing components of automobile.
- To focused on the application of principles to develop economical and sustainable automotive designs
- Communicate on a global level to solve automobile engineering problems

2. Features of the Course

- Resolve engineering problems and find appropriate solutions by applying mechanical, thermodynamic, pneumatic, hydraulic and electrical principles.
- Design new products and improve existing one
- Research and Development of Hybrid Technology
- Planning and designing new production process

3. Scope and Future Prospects

- Pursue higher course and thereby get induced in R & D
- Medium to large scale entrepreneurship with plenty of new features
- Taking responsibility for individual projects, managing associated budgets, production schedules and resources
- Supervising quality control with safety and security of new form of transport

4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry, and mathematics (PCM); at least pass the PCM admission test (KUCAT).

5. Financial Aid and Scholarship

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact the Department for other department-specific scholarship provisions.

6. Internship

Final year students are sent in various industries matching the interest of the student, department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth



creation and social benefits. Further, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.

7. Students' Club

Established in 2002 A.D., AMES is a student wing of Mechanical Engineering students, which provides platform to delve into the practical side of the contextual matters and involves the students in various co-curricular and extra-curricular activities through various programs. The club is supervised by the Department and conducts different programs as per the academic calendar in response to the Department.

The Department also organizes annual student-project exhibition and publishes a year book "Avianta"

For more detail: <http://www.ku.edu.np/med>

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 207 Differential Equations and Complex Variables [4]	EEEG 201/204 Basic Electronics [2]	MEEG 213 Material Science & Metallurgy [3]	MEEG 216 Engineering Mechanics [3]	MEEG 217 Basic Manufacturing Processes [3]	MEEG 219 Metrology [3]		MEEG 214 Engineering Project [2]	20
	II	MATH 208 Statistics & Probability [3]	MGTS 301 Engineering Economics [3]	MCSC 202 Numerical Methods [3]	MEEG 202 Strength of Materials [3]	MEEG 206 Theory of Machines [3]	MEEG 207 Engineering Thermodynamics [3]		MEEG 215 Engineering Project [2]	20
III	I	MGTS 403 Engineering Management [3]	COEG 304 Instrumentation and Control [3]	MEEG 301 Fluid Mechanics [3]	MEEG 306 Heat Transfer [3]	MEEG 308 Production Planning & Control [3]	MEEG 315 Machine Element Design & Processes I [3]		MEEG 312 Engineering Project [2]	20
	II	MGTS 402 Engineering Entrepreneurship [3]	MEEG 318 Machine Element Design & Processes II [3]	MEPP 403 Refrigeration & Air Conditioning [3]	MEPP 408 Maintenance Engineering [3]	MEPP *** Fluid Power System [3]	MEPP 316 Heat and Power Engineering [3]		MEEG 313 Engineering Project [2]	20
IV	I	MEPP 427 Mechatronics [3]	MEPP 412 Automobile Engineering [3]	MEPP *** Elective I [3]	MEPP *** Elective II [3]				MEPP 406 Engineering Project [3]	15
	II							MEPP 434 Industrial Training [6]	MEPP *** Engineering Project [6]	12

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Code	Subject	Code	Subject	Code	Subject
MEPP ***	Automobile Engines, Fuels & Lubricants	MEPP ***	Electrical, Electronics & Air Conditioning	MEPP ***	Vehicle Dynamics
MEPP ***	Automobile Chassis and Transmission	MEPP ***	Alternative Fuels & Energy Systems	MEPP ***	Vehicle Body Engineering
MEPP ***	Engine Auxiliary Systems	MEPP ***	Automobile Chassis Component Design	MEPP ***	Noise, Vibration and Harshness
MEPP ***	Advanced IC Engine	MEPP ***	Advanced Metrology & Instrumentation	MEPP ***	Manufacturing of Automobile Components

Bachelor of Engineering in Mechanical Engineering (Design and Manufacturing)

Imagination is a one of the integral parts of human mind. But with only imagination, one cannot explain or convince the world. One has to create physical blueprints of the imagination. This is where Design & Manufacturing enters. This subdivision of Mechanical Engineering is the road-map to translate one's imagination to reality. Design is the building block of all engineering sub components. Every subject has its own type of design but the basics for all are the same. This sub-component of Mechanical Engineering aims in educating students with a holistic approach of design and its manufacturing. Some of the fields that this subcomponent deals with are Machine Element Design, Industrial Automation, Robotics, CAD/CAM, Ergonomics, etc.



1. Why Design and Manufacturing?

- It is the building block of all engineering sub components
- To develop skills of machine element design & manufacturing
- To acquire latest technology on Computer Aided Design & Manufacturing
- It deals with industrial automation through robotics



2. Features of the Course

- Hands-on skill development on Machine Element Design
- Knowledge of manufacturing processes & production planning

3. Scope and Future Prospects:

- National & International Design & Modelling Industries
- Manufacturing, Automation Industry
- Research Laboratories
- Process Industry, Manufacturing & Design Companies
- Self-Employment and Individual consultants
- Opportunities for higher studies

4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry, and mathematics (PCM); at least pass the PCM admission test (KUCAT).

5. Financial Aid and Scholarship

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and

merit based partial tuition scholarships as per KU provision. Contact the Department for other department-specific scholarship provisions.

6. Internship

Final year students are sent in various industries matching the interest of the student, department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Furthermore, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.



Machine Shop

7. Students' Club

The student club is AMES as described in Automobile sub-division of Mechanical Engineering.

For more detail: <http://www.ku.edu.np/med>

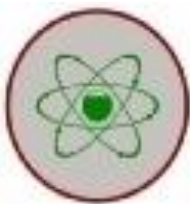
I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 207 Differential Equations and Complex Variables [4]	EEEG 201/204 Basic Electronics [2]	MEEG 213 Material Science & Metallurgy [3]	MEEG 216 Engineering Mechanics [3]	MEEG 217 Basic Manufacturing Processes [3]	MEEG 219 Metrology [3]		MEEG 214 Engineering Project [2]	20
	II	MATH 208 Statistics & Probability [3]	MGTS 301 Engineering Economics [3]	MCSC 202 Numerical Methods [3]	MEEG 202 Strength of Materials [3]	MEEG 206 Theory of Machines [3]	MEEG 207 Engineering Thermodynamics [3]		MEEG 215 Engineering Project [2]	20
III	I	MGTS 403 Engineering Management [3]	COEG 304 Instrumentation and Control [3]	MEEG 301 Fluid Mechanics [3]	MEEG 306 Heat Transfer [3]	MEEG 308 Production Planning & Control [3]	MEEG 315 Machine Element Design & Processes I [3]		MEEG 312 Engineering Project [2]	20
	II	MGTS 402 Engineering Entrepreneurship [3]	MEEG 318 Machine Element Design & Processes II [3]	MEPP 403 Refrigeration & Air Conditioning [3]	MEPP 408 Maintenance Engineering [3]	MEPP *** Fluid Power System [3]	MEPP *** / MEEG 317 Advance Manufacturing Process [3]		MEEG 313 Engineering Project [2]	20
IV	I	MEPP 427 Mechatronics [3]	MEPP 412 Automobile Engineering [3]	MEPP *** Elective I [3]	MEPP *** Elective II [3]				MEPP 406 Engineering Project [3]	15
	II							MEPP 434 Industrial Training [6]	MEPP *** Engineering Project [6]	12

*** List of Electives (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
MEPP 430	Finite Element Method/Techniques	MEPP ***	Properties of Failure of Material	MEPP ***	Machine Tool Design
MEPP ***	CAD /CAM	MEPP ***	Product Design & Development	MEPP ***	Work Study & Ergonomics
MEPP ***	Computer Numeric Control	MEPP ***	Advanced Mechanism Design	MEPP ***	Robotics & Industrial Automation

Bachelor of Engineering in Mechanical Engineering (Energy Technology)

The sub-division of Energy Technology from Mechanical Engineering is designed to play its part in the urgent need to change our thinking, application and energy usage pattern in regard to transforming the unsustainable exploitation of nonrenewable energy resources and converting them into energy units and services. The cluster aims to re-direct our thinking and passion towards a more sustainable and holistic energy generation society, through tapping into the plentiful available alternative energy resources and transforming them through different energy technologies and applications into user friendly energy units, for mankind's holistic development and benefit. The cluster aims to equip professional people with some basic knowledge of most popular energy resources, renewable energy technologies and systems, their basic technological principles, their economics and their impact on the environment and how they can be integrated into the our today's and future world energy demands and systems.



1. Why Energy Technology?

- To understand the national and global energy production and consumption scenario.
- To understand the basics behind conversion of energy resources to useful energy.
- To study and design different global renewable energy conversions and local indigenous renewable technologies

2. Features of the Course

- Design of solar home system, thermal systems, rural electrification
- Study of Wind generators/turbines, biomass, etc.
- Energy management, conservation and environment impacts of energy usage.



3. Scope and Future Prospects

- Government office (Nepal Electricity Authority, Ministry of Energy), Energy plants, and Thermal plants.
- Research laboratories, NGOs and INGOs, and Academic institutions

4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry, and mathematics (PCM); at least pass the PCM admission test (KUCAT).



5. Financial Aid and Scholarship

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact department for other department specific scholarship provisions.



6. Internship

Final year students are sent in various industries matching the interest of the student, Department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Further, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.



7. Students' Club

The student club is AMES as described in Automobile sub-division of Mechanical Engineering.

For more detail: <http://www.ku.edu.np/med>

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 207 Differential Equations and Complex Variables [4]	EEEG 201/204 Basic Electronics [2]	MEEG 213 Material Science & Metallurgy [3]	MEEG 216 Engineering Mechanics [3]	MEEG 217 Basic Manufacturing Processes [3]	MEEG 219 Metrology [3]		MEEG 214 Engineering Project [2]	20
	II	MATH 208 Statistics & Probability [3]	MGTS 301 Engineering Economics [3]	MCSC 202 Numerical Methods [3]	MEEG 202 Strength of Materials [3]	MEEG 206 Theory of Machines [3]	MEEG 207 Engineering Thermodynamics [3]		MEEG 215 Engineering Project [2]	20
III	I	MGTS 403 Engineering Management [3]	COEG 304 Instrumentation and Control [3]	MEEG 301 Fluid Mechanics [3]	MEEG 306 Heat Transfer [3]	MEEG 308 Production Planning & Control [3]	MEEG 315 Machine Element Design & Processes I [3]		MEEG 312 Engineering Project [2]	20
	II	MGTS 402 Engineering Entrepreneurship [3]	MEEG 318 Machine Element Design & Processes II [3]	MEPP 403 Refrigeration & Air Conditioning [3]	MEPP 408 Maintenance Engineering [3]	MEPP *** Fluid Power System [3]	MEPP *** / MEEG 316 Heat and Power Engineering [3]		MEEG 313 Engineering Project [2]	20
IV	I	MEPP 428 Renewable Energy [3]	MEEG 309 Hydraulic Machines [3]	MEPP *** Elective I [3]	MEPP *** Elective II [3]				MEPP 406 Engineering Project [3]	15
	II							MEPP 434 Industrial Training [6]	MEPP *** Engineering Project [6]	12

*** **List of Electives** (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
MEPP ***	Wind Energy	MEPP ***	Energy Systems & Society	MEPP ***	Energy Economics & Policies
MEPP ***	Energy Meteorology & Storage Technology	MEPP ***	Solar PV Systems	MEPP ***	Biomass Engineering
MEPP ***	Biogas Technology	MEPP ***	Solar Thermal Systems		

Bachelor of Engineering in Mechanical Engineering (Hydropower)

Hydropower has always played a cardinal role in sufficing rural and urban populace with elementary lighting facilities and basic energy requirements for household as well as in meeting energy demand at the national level. The development and growth of hydropower in Nepal has been significantly rising in recent days due to the increasing demand of electricity and establishment of newer power plants to meet the same. In addition to the larger national projects, many small scale and rural community based hydels have emerged as a boom in terms of rural electrification. The Bachelor degree program in Mechanical Engineering (Hydropower) encompasses all the basics of hydropower, the engineering behind different components, installation, maintenance and policies. The course covers fundamentals of hydropower generation, different hydro-mechanical components and ancillaries of a hydropower plant, the design aspects of such mechanical equipment and hydro turbines. The course is complemented by laboratory works and field visits.



1. Why Hydropower?

- To gain a deeper understanding about working of hydropower plants, its different components
- Learn the design strategy of hydro mechanical components and turbines
- Installation, maintenance, testing and related research

2. Features of the Course

- Working of hydropower plants, micro hydro plants
- Design and application of different hydro turbines, energy policies, components design
- Laboratory work assisted lectures & guest lectures from experts

3. Scope and Future Prospects

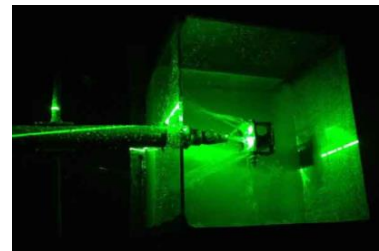
- Hydropower plants, powerhouses
- Manufacturing industries
- Research laboratories
- Higher studies in design and analysis
- Consultants to companies and clients

4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry, and mathematics (PCM); at least pass the PCM admission test (KUCAT).

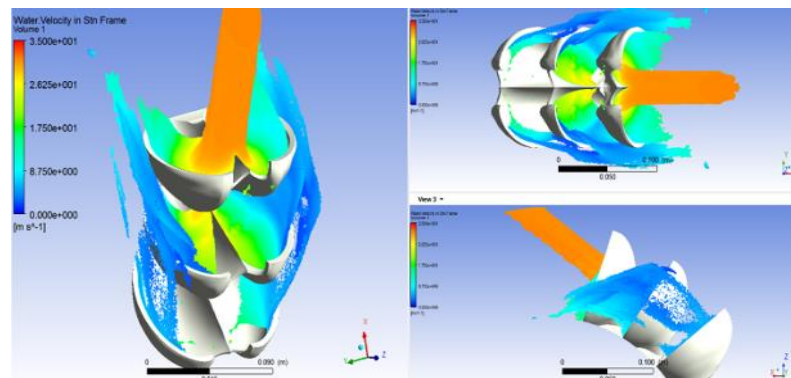
5. Financial Aid and Scholarship

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact the Department for other department specific scholarship provisions.



6. Internships

Final year students are sent in various industries matching the interest of the student, Department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Furthermore, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.



7. Students' Club

The students' club is AMES as described in Automobile sub-division of Mechanical Engineering.

For more detail: <http://www.ku.edu.np/med>

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 207 Differential Equations and Complex Variables [4]	EEEG 201/204 Basic Electronics [2]	MEEG 213 Material Science & Metallurgy [3]	MEEG 216 Engineering Mechanics [3]	MEEG 217 Basic Manufacturing Processes [3]	MEEG 219 Metrology [3]		MEEG 214 Engineering Project [2]	20
	II	MATH 208 Statistics & Probability [3]	MGTS 301 Engineering Economics [3]	MCSC 202 Numerical Methods [3]	MEEG 202 Strength of Materials [3]	MEEG 206 Theory of Machines [3]	MEEG 207 Engineering Thermodynamics [3]		MEEG 215 Engineering Project [2]	20
III	I	MGTS 403 Engineering Management [3]	COEG 304 Instrumentation and Control [3]	MEEG 301 Fluid Mechanics [3]	MEEG 306 Heat Transfer [3]	MEEG 308 Production Planning & Control [3]	MEEG 315 Machine Element Design & Processes I [3]		MEEG 312 Engineering Project [2]	20
	II	MGTS 402 Engineering Entrepreneurship [3]	MEEG 318 Machine Element Design & Processes II [3]	MEPP 403 Refrigeration & Air Conditioning [3]	MEPP 408 Maintenance Engineering [3]	MEPP *** Fluid Power System [3]	MEPP *** Turbo Machinery [3]		MEEG 313 Engineering Project [2]	20
IV	I	MEPP 428 Renewable Energy [3]	MEEG 309 Hydraulic Machines [3]	MEPP *** Elective I [3]	MEPP *** Elective II [3]				MEPP 406 Engineering Project [3]	15
	II							MEPP 434 Industrial Training [6]	MEPP *** Engineering Project [6]	12

*** **List of Electives** (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
MEPP ***	Hydropower Engineering	MEPP ***	Computational Fluid Dynamics	MEPP ***	Governor Design for Hydropower Plants
MEPP ***	Electrical Equipment for Hydropower	MEPP ***	Maintenance of Hydropower Plants	MEPP ***	Micro-hydro Power
MEPP ***	Hydro Mechanical Equipment	MEPP ***	Performance Analysis of Turbomachines		

Bachelor of Engineering in Computer Engineering

1. Why Computer Engineering?

Computer engineering students study the applied computing skills. They are involved in the study of computer architecture, design digital circuits, they develop codes to simulate the computer and they test the performance of the computer. They also study and develop operating system and necessary software that run on computer and smart phones. Computer engineering students also study the development of complex networks like cloud and analyze big data with the concept of IoT (Internet of Things). The curriculum focuses on the theories, principles and practices of relevant areas of traditional electrical engineering and mathematics.

2. Where are the Career Opportunities?

- Research centres
- Small and heavy industries
- Software developing companies
- Government organizations
- Academic Institutions
- Banking sectors
- ISP's and Telecommunications etc.



3. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry and mathematics (PCM) OR physics, mathematics, and computer science (PMCs); at least pass the PCM admission test (KUCAT).

4. Financial Aid and Scholarships

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact the Department for other department-specific scholarship provisions.

5. Internships

Final year students are sent in various industries matching the interest of the student, Department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Furthermore, students with high

degree of professional caliber and attitude can get job placement as soon as they finish their study.

6. Students' Club

Kathmandu University Computer Club (KUCC) (<http://ku.edu.np/kucc/>) is an independent club involving students of Computer Science and Engineering. It was established on July 10, 1997 with the vision of "An eye of IT students." The club enhances cooperation among students to create learning environment, help solving problem of students and even help on the activities of DoCSE. The students together with the faculties organize IT Meet every year which is a major attraction event for prospective students and related organizations. It publishes IT Express Magazine annually.



IT Meet 2016



IT Meet 2016

For more details: <http://www.ku.edu.np/cse/>

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 208 Statistics and Probability [3]	MCSC 201 Discrete Mathematics [3]	EEEG 202 Digital Logic [3]	EEEG 211 Electronics Engineering I [3]	COMP 202 Data Structures and Algorithms [3]		COMP 208 Laboratory Work [1]	COMP 206 Computer Project I [2]	18
	II	MATH 207 Differential Equations and Complex Variables [4]	MCSC 202 Numerical Methods [3]	COMP 204 Communication and Networking [3]	COMP 231 Microprocessors and Assembly Language [3]	COMP 232 Database Management System [3]			COMP 207 Computer Project II [2]	18
III	I	MGTS 301 Engineering Economics [3]	COEG 304 Instrumentation and Control [3]	COMP 301 Principles of Programming Languages [3]	COMP 307 Operating Systems [3]	COMP 315 Computer Architecture & Organization [3]		COMP 310 Laboratory Work [1]	COMP 303 Combined Engineering Project [2]	18
	II	COMP 302 System Analysis and Design [3]	COMP 304 Operations Research [3]	COMP 306 Embedded Systems [3]	COMP 314 Algorithm and Complexity [3]	COMP 341 Human Computer Interaction [3]	COMP 342 Computer Graphics [3]		COMP 308 Combined Engineering Project [1]	19
IV	I	MGTS 403 Engineering Management [3]	COMP 401 Software Engineering [3]	COMP 407 Digital Signal Processing [3]	COMP 409 Compiler Design [3]	COMP 472 Artificial Intelligence [3]	**** ** Electives I [3]			18
	II	MGTS 402 Engineering Entrepreneurship [3]	**** ** Elective II [3]					COMP 408 Internship [6]		12

*** **List of Electives** (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
COMP 303	Multimedia System	COMP 473	Speech and Language Processing	COMP 481	Decision Support system
COMP 402	Network Programming	COMP 476	e-Commerce	COMP 482	Data Mining
COMP 404	GIS and Remote Sensing	COMP 477	Knowledge Management	COMP 483	Fuzzy Logic and Applications
COMP 410	Object Oriented Analysis and Design	COMP 478	Cloud Computing	COMP 484	Machine Learning
COMP 423	Theory of Computation	COMP 479	Wireless Sensor Network	COMP 485	Information Security
COMP 472	Artificial Intelligence	COMP 480	e-Governance	COMP 486	Software Dependability

Bachelor of Science in Computer Science

(BSc Computer Science is the program of School of Science, managed mostly by Dept. of Computer Science and Engineering)

1. Why Computer Science?

The study of computer science provides student opportunity to explore the practical implementation of science of theoretical computing. The course is designed in such a way that student will be involved in solving computational problems, analyzing computational complexities of what a computer can do and cannot do, design new algorithms to maximize the capabilities of a computer etc. The computer science course at KU is timely updated to the requirement of computer science study not only at national level but also at international level.

The work of Computer Science graduate falls into three categories:

- They develop skills of solving complex problems
- They analyse the capabilities of computer and provide best solution to maximize its performance
- They propose new theory and prove those theory using best algorithms.

2. Where are the Career Opportunities?

- Research centres
- Small and heavy industries
- Software developing companies
- Government organizations
- Academic Institutions
- Banking sectors
- ISP's and Telecommunications etc.

3. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry and mathematics (PCM) OR physics, mathematics, and computer science (PMCs) ; at least pass the PCM admission test (KUCAT).

4. Financial Aid and Scholarship

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact the Department for other department-specific scholarship provisions.

5. Internship

Final year students are sent in various industries matching the interest of the student, Department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Furthermore, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.

6. Students' Club

The student club is KUCC as described in Computer Engineering program.



Annual General Meeting of KUCC



IT Meet 2016

For more details: <http://www.ku.edu.np/cse/>

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 208 Statistics and Probability [3]	MCSC 201 Discrete Mathematics/Structure [3]	EEEG 202 Digital Logic [3]	EEEG 211 Electronics Engineering I [3]	COMP 202 Data Structures and Algorithms [3]		COMP 208 Laboratory Work [1]	COMP 206 Computer Project I [2]	18
	II	MATH 207 Differential Equations and Complex Variables [4]	MCSC 202 Numerical Methods [3]	COMP 204 Communication and Networking [3]	COMP 231 Microprocessors and Assembly Language [3]	COMP 232 Database Management System [3]			COMP 207 Computer Project II [2]	18
III	I	MGTS 301 Engineering Economics [3]	COMP 307 Operating Systems [3]	COMP 315 Computer Architecture & Organization [3]	COMP 316 Theory of Computation [3]	COMP 317 Computational Operations Research [4]	COMP 342 Computer Graphics [3]		COMP 311 Combined/Computer Project [1]	20
	II	MATH 322 Combinatorics [3]	COMP 302 System Analysis and Design [3]	COMP 409 Compiler Design [3]	COMP 314 Algorithms and Complexity [3]	COMP 323 Graph Theory [3]	COMP 341 Human Computer Interaction [3]		COMP 313 Combined/Computer Project [2]	20
IV	I	MGTS 403 Engineering Management [3]	COMP 401 Software Engineering [3]	COMP 472 Artificial Intelligence [3]	Elective I [3]	Elective II [3]				15
	II	MGTS 402 Engineering Entrepreneurship [3]	COMP 486 Software Dependability [3]					COMP 408 Internship [6]		12

*** **List of Electives** (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
COMP 303	Multimedia System	COMP 473	Speech and Language Processing	COMP 481	Decision Support system
COMP 402	Network Programming	COMP 476	e-Commerce	COMP 482	Data Mining
COMP 404	GIS and Remote Sensing	COMP 477	Knowledge Management	COMP 483	Fuzzy Logic and Applications
COMP 410	Object Oriented Analysis and Design	COMP 478	Cloud Computing	COMP 484	Machine Learning
COMP 423	Theory of Computation	COMP 479	Wireless Sensor Network	COMP 485	Information Security
COMP 429	Fault Tolerant Systems	COMP 480	e-Governance		

Bachelor of Engineering in Civil Engineering with Specialization in Hydropower

1. Why Civil Engineering?

Infrastructure development should be financially viable, socially acceptable and ecologically sustainable. Civil engineering encompasses branches of engineering science to develop and maintain sustainable infrastructures. It covers a wide-range of specialized fields that address all the above mentioned issues. Hydropower Engineering is the specialized field of civil engineering that requires multi-disciplinary knowledge of science and technology. Nepal's present goal is to build hydropower projects for economic and social development. The vision is to install 25 GW in ten years. This objective must be addressed from all levels. To increase the in-house capacity implementation of technically sound plans, designs, operations and maintenance of hydropower plants is essential.

The Department of Civil Engineering is highly committed to:

- Address the need of infrastructure development
- Produce competent and development oriented skilled engineers
- Enhance indigenous and global technology through research, development and education.

2. Features of the Course

- Syllabus compatible with any reputed academic institutions.
- Regular industry-based project works
- Field/Industry-based final semester internship
- On site learning provisions
- Dedicated faculty and laboratories

3. Where are the Career Opportunities?

- Hydropower Industries
- Government Organizations
- NGOs/INGOs
- Academia
- Construction Material Industries
- Contractors
- Development Banks and Financial Institutions
- Research Centres.



4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry, and mathematics (PCM); at least pass the PCM admission test (KUCAT).

5. Financial Aid and Scholarships

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact the Department for other department-specific scholarship provisions.



6. Internship

Final year students are sent in various industries matching the interest of the student, Department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Furthermore, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.



For more detail: <http://ku.edu.np/dcge/>

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 205 Trigonometry & Analytical Geometry [3]	MATH 207 Differential Equations and Complex Variables [4]	CIEG 201 Construction Materials and Concrete Technology [3]	CIEG 202 Engineering Survey I [3]	CIEG 203 Applied Mechanics [2]	CIEG 204 Fluid Mechanics [3]		CIEG 205 Engineering Project III [2]	20
	II	MATH 208 Statistics and Probability [3]	MCSC 202 Numerical Methods [3]	CIEG 207 Engineering Survey II [3]	CIEG 208 Strength of Material [3]	CIEG 209 Engineering Geology [3]	CIEG 206 Engineering Hydrology and Sedimentology [3]		CIEG 210 Engineering Project IV (Survey Camp) [2]	20
III	I	MGTS 301 Engineering Economics [3]	CIEG 302 Remote Sensing & GIS [3]	CIEG 303 Soil & Rock Mechanics [3]	CIEG 305 Structural Analysis I [3]	CIEG 306 Estimating & Valuation [2]	CIEG 301 Hydraulic and River Engineering [3]	CIEG 304 Hydraulic Structure [3]		20
	II	CIEG 312 / EPEG *** Electrical Power System Engineering [3]	CIEG 308 Structural Analysis II [3]	CIEG 309 Foundation Engineering [3]	CIEG 310 Reinforced Concrete Structures Design [3]	CIEG 311 / MEEG 309 Hydraulic Machines [3]	**** ** Electives [3]		CIEG 307 Engineering Project V (Hydropower Engineering I) [3]	21
IV	I	CIEG 405 Entrepreneurship and Ethics [3]	CIEG 404 Environmental and Social Engineering (Impact Study) [3]	CIEG 401 Transportation Engineering [3]	CIEG 402 Steel and Timber Structures [3]	CIEG 403 Construction Management [3]	**** ** Electives [3]		CIEG 406 Hydropower Engineering II (Engg.VI) [3]	21
	II							CIEG 449 Internship [3]	CIEG 499 Final Engineering Project [9]	12

*** List of Electives (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
CIEG 313	Engineering Code (Structural and Non-Structural) of Practice	CIEG 314	Water Supply and Sanitation (Sanitary Engineering)	CIEG 315	Bio-Engineering
CIEG 407	Irrigation Engineering	CIEG 408	Tunnel and Underground Construction	CIEG 409	Building Construction Technology
CIEG 316	Finite Element Method	CIEG 317	Rock and Geotechnical Engineering	CIEG 318	Earthquake Engineering
CIEG 410	Computational Hydraulics	CIEG 411	Sediment Management	CIEG 412	Operation Research and System Analysis
CIEG 413	Structural Analysis of Hydraulic Structures	CIEG 311/414	Project Operation and Maintenance	CIEG 415	Energy Technology and Natural Resource

Bachelor of Engineering in Geomatics Engineering

1. Why Geomatics Engineering?

Geomatics is a systemic, multidisciplinary, integrated approach to selecting the instruments and the appropriate techniques for collecting, storing, integrating, modeling, analyzing, retrieving at will, transforming, displaying and distributing spatially geo referenced data from different sources with well-defined accuracy characteristics, continuity and in a digital format .

The subject is found upon the scientific framework of geodesy. It uses terrestrial, marine, air-borne and satellite-based sensors to acquire spatial and other data.

Besides collection of spatial data, some initiatives are presently being developed worldwide using Geomatics disciplines and techniques for the regulation of Geo Spatial Information, or more simply Geo Information (GI) and for the adequate use of Earth Observation (EO) data for studying and managing environmental hazards and risks.

The objectives of the course are:

- To produce qualified academic manpower in the field of Surveying, mapping, Land Administration and geo informatics to satisfy the need of various institutions within the country and abroad.
- To establish the collaborative relationship with foreign institutions of the similar function for mutual benefit by student exchange and sharing of knowledge and technology for the benefit of mankind.
- To conduct and promote research and development activities in the field of Geo informatics and Land Administration.

2. Features of the Course

- Syllabus compatible with any reputed academic institutions.
- Regular industry-based project works
- Field/Industry-based final semester
- On site learning provisions
- Dedicated faculty and laboratories

3. Where are the Career Opportunities?

- Government ministries and departments
- Nepal Army/ Nepal Police
- Nepal Electricity Authority
- Private sector in Infrastructure development activities
- NGO/INGO
- International job market (Universities, private and public companies)
- Academia and research institutes.

4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry and mathematics (PCM) OR physics, mathematics, and computer science (PMCs) ; at least pass the PCM admission test (KUCAT).

5. Financial Aid and Scholarships

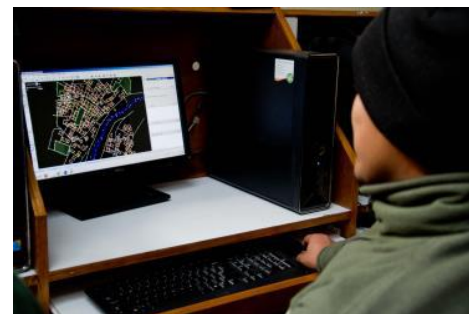
One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision.

This is a joint program of Kathmandu University, School of Engineering with Land Management Training Center, Dhulikhel. LMTC will provide 35% scholarships for 20 students (each region maximum 4 students) based on merit for five development regions and 100% scholarship for 1 government employee: Engineering Services: Survey Group.



6. Internships

Final year students are sent in various industries matching the interest of the student, Department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Furthermore, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.



7. Students' Club

The students' club is Geomatics Engineering Society.

For more detail: <http://ku.edu.np/dcge/>

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 207 Differential Equations and Complex Variables [4]	MATH 205 Trigonometry & Analytical Geometry [3]	GEOM 201 Introduction to Surveying and Geomatics [2]	GEOM 202 Control Surveying [4]	GEOM 205 Topographical Surveying [3]			GEOM 208 Engineering Project III [2]	18
	II	MATH 208 Statistics and Probability [3]	MCSC 202 Numerical Methods [3]	COMP 204 Communication & Computer Networking [3]	CEEG 201 / CIEG *** Basic Civil Engineering [3]	GEOM 204 Geographical Information Systems [3]	GEOM 206 Cartography [3]	GEOM 203 Field Surveys I [4]		22
III	I	MGT 301 Engineering Economics [3]	GEOM 303 Engineering and Construction Survey [3]	GEOM 316 Photogrammetry [4]	GEOM 317 Physical Geodesy [3]	GEOM 318 Spatial Data Base Management [3]			GEOM 314 Engineering Project IV [2]	18
	II	GEOM 306 Land Administration [3]	GEOM 307 Theory of Errors and Adjustment [2]	GEOM 310 Cadastral [3]	GEOM 313 Modern Cartography [2]	GEOM 315 Satellite Geodesy [3]	GEOM 319 Computational Methods in Geomatics [3]	GEOM 304 Field Surveys II [4]		20
IV	I	CIEG 405 Entrepreneurship and Ethics [3]	GEOM 401 Survey Project Management [3]	GEOM 402 Remote Sensing [3]	GEOM 405 Web GIS [3]	GEOM 406 Spatial Data Infrastructure [2]	*** ** Electives I [3]	*** ** Electives II [3]		20
	II						GEOM 412 Internship [3]	GEOM 404 Field Surveys III [4]	GEOM 410 Final Independent Project [6]	13

*** **List of Electives** (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject
GEOM 408	Environmental Modeling	GEOM 411	Python Programming	GEOM 415	Land Use Planning and Environmental Management
GEOM 409	Hydrological Simulation and Modeling	GEOM 413	Spatial Data Modeling and Database Design	GEOM 416	Geodetic Astronomy
GEOM 410	3-D Computer Graphics and Virtual Reality	GEOM 414	Digital Imaging and Applications	GEOM 417	3-D Cadastral

Bachelor of Architecture

(To be started in the near future)

1. Why Architecture?

Nepal has entered into the era of economic prosperity and social development. Nepal faces dual challenge of conserving the traditional character of her existing settlements and creating completely new settlements that can provide modern amenities to the growing population. The need of architects will grow further in the years to come.

Architecture course in KU is designed to address the need of the Nepalese society- both urban and rural, in shaping a sustainable, eco-friendly and livable built environment. Moreover, to give it a distinct character, the course has been tailored to focus more on mountain architecture. The project work shall focus preferably on green and sustainable building design, landscaping and rural architecture in the context of mountain environment. The graduate of KU shall be able to design not only complex buildings and structures; they will also be able to design buildings in difficult and complex site conditions.

2. Features of the Course

- Focus on mountain architecture
- Off hour workshop and design studio based learning
- On site learning provisions
- Design studio in community outreach
- Dedicated laboratory for structure based Courses
- Regular field and site visits.

3. Where are the Career Opportunities?

- Government ministries & departments
- Private sector in Infrastructure development activities
- NGOs/INGOs
- International job market (Universities, private and public companies).

4. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry and mathematics (PCM) OR physics, mathematics, and computer science (PMCs) ; at least pass the PCM admission test (KUCAT).

5. Financial Aid and Scholarships

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision.

6. Internships

Final year students are sent in various industries matching the interest of the student, Department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits.

Furthermore, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.



KU Master Plan

More info will be available at: <http://ku.edu.np/dcqe/>

I	I	MATH 119 Engineering Mathematics I [3]	ARCH 101 / PHYS *** Building Sciences I [3]	ENGT 105 Communication Skills I (English) [2]	ARCH 111 History of Architecture I [3]	ARCH 121 Design Theory [2]	ARCH 131 Architectural Drawing and Graphics I [3]	ARCH 151 Art Appreciation and Practice I [2]	ARCH 141 Design Studio I [2]	20
	II	MATH 121 Engineering Mathematics II [3]	NEPT 101 Communication Skills II (Nepali) [2]	CIEG 161 Building Material I [3]	ARCH 112 History of Architecture II [3]	ARCH 171 Workshop I [2]	ARCH 132 Architectural Drawing and Graphics II [3]	ARCH 152 Art Appreciation and Practice II [2]	ARCH 142 Design Studio II [3]	21
II	I	SOSC 211 Sociology [2]	CIEG 213 Applied Mechanics [3]	CIEG 221 Building Construction I [3]	CIEG 241 Engineering Surveying I [2]	ARCH 203 History of Architecture III [3]	ARCH 233 Architectural Drawing and Graphics III [3]		ARCH 243 Design Studio III [4]	20
	II	CIEG 222 Building Construction II [3]	CIEG 231 Strength of Material [3]	CIEG 242 Engineering Surveying II [2]	CIEG 252 Building Material II [3]	ARCH 202 / ENVE *** Building Sciences II [3]		ARCH 272 Workshop II [2]	ARCH 244 Design Studio IV [5]	21
III	I	MGTS 301 Engineering Economics [2]	ENVE 319 Building Services I [2]	CIEG 331 Theory of Structures [3]	ARCH 305 Building Regulation [2]	ARCH 351 Mountain Architecture [2]	ARCH 331 Working Drawing I [2]	ARCH 333 Computer Aided Design and Drafting [2]	ARCH 345 Design Studio V [6]	21
	II	EEEE 331 Building Services II [2]	CIEG 306 Estimation and Valuation [3]	CIEG 323 Building Construction III [3]	CIEG 341 Design of Steel, Masonry and Timber Structures [3]	ARCH 334 Landscape Design I [2]	ARCH 332 Working Drawing II [2]		ARCH 346 Design Studio VI (Mountain) [6]	21
IV	I	MEPP 451 Building Services III [2]	CIEG 441 Design of RCC Structures [3]	ARCH 411 Interior Design I [2]	ARCH *** Elective I [3]			ARCH 435 Landscape Design Studio II [3]	ARCH 447 Design Studio VII [8]	21
	II	MGTS 402 Engineering Entrepreneurship [3]	CIEG 403 Construction Management [3]	ARCH 421 Seminar and Directed Studies [2]	ARCH *** Elective II [3]			ARCH 412 Interior Design Studio II [2]	ARCH 448 Design Studio VIII [8]	21
V	I							ARCH 451 Internship [6]	ARCH 449 Mini Project [6]	12
	II	ARCH 461 Professional Ethics [2]							ARCH 471 Architectural Design Thesis [12]	14

Bachelor of Engineering in Chemical Engineering

1. Why Chemical Engineering?

Chemical engineers, also termed as 'Universal Engineers' are at the forefront of technology, innovation and research and their role is becoming alarmingly important. They are concerned mainly to transform raw materials into useful and commercial end products by employing the task of separation processes, reactive processes, equipment and process design and plans, troubleshooting of the process system. In addition, ensuring compliance with health, safety, environment and economics, conducting research into improved manufacturing processes, monitoring and optimizing performance of production processes also fall under the scope of chemical engineering.

2. Where are the Career Opportunities?

Chemical engineers generally work in manufacturing plants, research laboratories or pilot plants and also in business and management offices where they visit the production facilities. Some of the fields including but not limited to the scope of chemical engineers are:

- Chemical industries, food processing, beverages
- Agro-products and agro-chemicals, explosives, biotechnology
- Metallurgical, pharmaceuticals, textiles, paints and dyes
- Cement, paper making, polymers, cosmetics, healthcare products
- Oil and gas, petrochemicals or refining, power generation
- Electronics and advanced (Nano and composite) materials



3. What is Admission Eligibility?

Candidates should have passed I. Sc. or 10+2 (or equivalent) with minimum of 50% marks in aggregate and 50% in aggregate in physics, chemistry, and mathematics (PCM); at least pass the PCM admission test (KUCAT).

4. Financial Aid and Scholarships

One semester grade point average merit based full tuition scholarship per 30 student intake capacity; UGC formula funding based scholarship; other need and merit based partial tuition scholarships as per KU provision. Contact the Department for other department -specific scholarship provisions.

5. Internships

Final year students are sent in various industries matching the interest of the student, department, and the industry. Students get the experience of working in professional environment and know about professional requirements better. They will be more equipped with the knowledge and skills that are being used in practice for wealth creation and social benefits. Further, students with high degree of professional caliber and attitude can get job placement as soon as they finish their study.



For more details: <http://www.ku.edu.np/chemeng/>

I	I	MATH 101 Calculus and Linear Algebra [3]	PHYS 101 General Physics I [3]	CHEM 101 General Chemistry [3]	ENGT 101 Communication Skills I [2]	COMP 103 Structured Programming [2]	ENGG 111 Elements of Engineering I [3]	EDRG 101 Engineering Drawing I [2]	ENGG 101 Eng. Project Preparation and Workshop Practice [2]	20
	II	MATH 104 Advanced Calculus [3]	PHYS 102 General Physics II [3]	ENGT 102 Communication Skills II [2]	COMP 116 Object Oriented Programming [3]	ENVE 101 Introduction to Environmental Engineering [2]	ENGG 112 Elements of Engineering II [3]	EDRG 102 Engineering Drawing II [2]	ENGG 102 Engineering Project [2]	20
II	I	MATH 207 Differential Equations and Complex Variables [4]	CHEM 203 Organic Chemistry [3]	EEEE 201 Basic Electronics [2]	MEEG 213 Material Science and Metallurgy [3]	MEEG216 Engineering Mechanics [3]	CHEG 201 Chemical Process Calculation [3]		CHEG 202 Engineering Project III [2]	20
	II	MATH 208 Statistics and Probability [3]	MCSC 202 Numerical Methods [3]	CHEG 210 Introduction to Transport Phenomena [3]	CHEG 211 Thermodynamics I [3]	CHEG 212 Fluid Mechanics [3]	CHEG 213 Principle of Biochemistry [3]		CHEG 214 Engineering Project IV [2]	20
III	I	MGTS 301 Engineering Economics [3]	CHEG 301 Thermodynamics II [3]	CHEG 302 Process control and Instrumentation [3]	CHEG 303 Heat Transfer [2]	CHEG 304 Biochemical Engineering Fundamental [3]	CHEG 305 Modeling and Simulation in Chemical Engineering [3]		CHEG 306 Engineering Project V [2]	19
	II	INAN 301 Instrumental Analysis [3]	CHEG 310 Unit operation [3]	CHEG 311 Chemical Process Technology [3]	CHEG 312 Chemical Reaction Engineering I [3]	CHEG 313 Mass transfer [2]	CHEG 314 Process Equipment Design [3]	*** ** Electives [3]		20
IV	I	MGTS 401 Industrial management [3]	MGTS 402 Engineering Entrepreneurship [3]	CHEG 401 Chemical Reaction Engineering II [3]	CHEG 402 Nano & Composite Materials [3]	CHEG 403 Plant Design [3]	*** ** Electives [3]	CHEG 404 Design Laboratory [2]		20
	II							CHEG 449 Internship [3]	CHEG 499 Project Work [9]	12

*** **List of Electives** (Electives may also be other courses offered as 4th year electives in the School of Engineering and additional courses offered by the department as electives)

Code	Subject	Code	Subject	Code	Subject

Bachelor of Business Information Systems (BBIS)

(BBIS is program of School of Management. The program is being run in KU Central Campus, Dhulikhel, at the Humanities and Management Unit of School of Engineering)

1. Why BBIS?

The BBIC@KU Central Campus is a constituent program of Kathmandu University School of Management (KUSOM). It is designed by blending the domain knowledge of the information systems and information technology with that of business and management. Such integrated program has been offered to address the demands of rapidly changing information technology (IT) driven business environment. The main objective of the Program is to prepare students to become competent, skilled, confident and socially responsive management professionals with sound knowledge, abilities and skills in information systems. More specifically, the program aims to:



- Provide students with broader perspective of the world, society, business information systems, and life by combining the study of management, information systems and information technology with the study of social sciences and humanities;
- Develop a habit of critical and creative thinking in students;
- Develop analytical and problem-solving abilities in students;
- Improve communicative and presentation skills of students;
- Familiarize students with contemporary concepts, tools and techniques of management;
- Deepen the knowledge and sharpen the expertise of students in the functional area of information systems;
- Prepare students as sensible and responsive citizens with a high degree of professional, social and ethical values;
- Prepare students for higher studies (Masters' level programs) in the areas of management and information systems.
- Enable the students to analyze the capabilities of computer and provide best solution to maximize its performance
- Prepare students to propose new theories and prove those theories using best algorithms.

2. Features

- Internships
- In-depth directed study
- Credit transfer from similar program upon approval from Dean's Office at KUSOM.
- Range of elective courses to match student's individual interests

3. Where are the Career Opportunities?

- Any kind of service or manufacturing industries and organization
- Software developing companies
- Government organizations
- Academic Institutions
- Banking sectors
- Other financial institutions etc.

4. What is Admission Eligibility?

Candidates should have passed 10+2 (or equivalent of at least two year duration) in any discipline with minimum of 50% marks in aggregate or CGPA of 2 on the scale of 4 from boards recognized by Kathmandu University; at least pass in Kathmandu University Undergraduate Management Admission Test (KUUMAT), analytical writing, and personal interview.

5. Financial Aid and Scholarship

Need and merit based partial/full tuition scholarships as per KU provision

6. Internship

The Internship – equivalent to three credit hours – is an integral part of the four-year Program. It is designed to provide students with an opportunity for learning, developing managerial and IT skills and gaining exposure through getting involved in a real organization. It familiarizes students with the nature, functions, problems, and potentials of a given organization and industry. Students are required to complete an internship program – which covers a period of eight to ten weeks in a selected organization during the last semester of the program – go graduate the BBIS program.



For more details: <http://www.ku.edu.np/hmu/>

Year	Sem.	Bachelor of Business Information Systems (BBIS) (Total Credit: 120)					Credit
I	I	MAS 101 Mathematics I [3]	ENG 101 English I [3]	GEM 201 Managerial Communication [3]	ECO 201 Microeconomics [3]	ACC 201 Financial Accountancy I [3]	15
	II	MAS 102 Mathematics II [3]	ENG 102 English II [3]	GEM 231 Business Management [3]	ECO 210 Macroeconomics [3]	ACC 202 Financial Accountancy II [3]	15
II	I	MAS 131 Statistics I [3]	PSY 141 Psychology [3]	SOS 121 Sociology [3]	COM 240 Information System Technology [3]	COM 314 Computer Programming [3]	15
	II	MAS 132 Statistics II [3]	SOS 131 Political Science [3]	COM 312 Data Structure and Algorithms [3]	GEM 230 Business Law [3]	FIN 202 Managerial Finance I [3]	15
III	I	MAS 103 Quantitative Techniques [3]	PSY 370 Logic [3]	COM 330 Database Management System [3]	HRM 230 Organizational Behavior [3]	FIN 203 Managerial Finance II [3]	15
	II	MAS 310 Operations Management [3]	COM 321 System Analysis and Design [3]	COM 334 Business Data Communications [3]	HRM 201 Human Resource Management [3]	MKT 201 Marketing [3]	15
IV	I	COM 315 Advanced Programming Techniques [3]	COM 340 Web Technology [3]	GEM 310 Entrepreneurship & NBF [3]	GEM 470 International Business [3]	Elective I [3]	15
	II	MAS 122 Management Information Systems [3]	COM 469 Software Engineering [3]	GEM 490 Strategic Management [3]	Internship [3]	Elective II [3]	15

*** List of Electives

Code	Subject	Code	Subject	Code	Subject
COM 321	Object-Oriented Analysis and Design	COM 470	Data Warehouse and Data Mining	GEM 330	Productivity and Quality Management
COM 331	Advanced Database Management Systems	COM 472	Decision Support and Expert System	GEM 332	Project Management
COM 360	E-Commerce	MKT 474	Service Management	GEM 361	Supply Chain Management
COM 441	Information Security				Directed Study

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11 August 2016: Latest information on undergraduate programs of the School; available online only