

K L University

Department of Electronics and Communication Engineering

Academic Year 2012-2013

Mapping of ECE Department Mission Statement with SOs, PSOs and PEOs

Program Outcomes

Mission statement of K L University:

Vision:

To be a globally renowned university.

Mission

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

Vision and Mission statement of ECE department

VISION

- To evolve into a globally recognized department in the frontier areas of Electronics & Communication Engineering (ECE).

MISSION

M1- To produce graduates having professional excellence.

M2- To carry out quality research having social & industrial relevance.

M3- To provide technical support to budding entrepreneurs and existing Industries.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

- **PEO1:** Practice engineering in a broad range of industrial, societal and real world applications.
- **PEO2:** Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.
- **PEO3:** Conduct themselves in a responsible, professional, and ethical manner.
- **PEO4:** Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

Student Outcomes

a	Ability to apply knowledge of mathematics, science, and engineering
b	Ability to design and conduct experiments, as well as to analyze and interpret data
c	Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d	Ability to function on multidisciplinary teams
e	Ability to identify, formulate, and solve engineering problems
f	Understanding of professional and ethical responsibility
g	Ability to communicate effectively
h	Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i	Recognition of the need for, and an ability to engage in life-long learning
j	Knowledge of contemporary issues
k	Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

K L UNIVERSITY
Vision and Mission Statement
2012

Vision

To be globally renowned university

Mission

To impart quality in higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging social needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values

K L UNIVERSITY
SCHOOL OF BIOSCIENCES AND BIOENGINEERING
DEPARTMENT OF BIOTECHNOLOGY
2013

VISION, MISSION, LONG TERM GOALS, SHORT TERM GOALS, PEO'S AND PO'S

VISION:

Attaining new heights in academic and research with global perspective for creation of health, wealth and welfare by applying engineering knowledge, creativity and technologies that will provide solutions to environmental, industrial, agricultural and health based problems.

MISSION:

- Impart scientific knowledge, strengthen R&D and educate the student to cater the global requirements in bioengineering technologies leading to an all-round professional and societal development by the student to empower India's incomparable human resource.

LONG TERM GOALS:

- To develop center for excellence.
- To achieve International projects and Patents.
- To develop incubation center for global needs.
- To attain DST-FIST level II.

SHORT TERM GOALS:

- To conduct International Conferences.
- To uplift all the laboratories so as to promote research and consultancy.
- To provide an excellent infrastructure facility to publish high indexed journals.
- To encourage teaching assistantship for the development of human values.
- To attract international students in UG, PG and PhD courses.
- To place students in core companies.

PROGRAM EDUCATIONAL OBJECTIVES

The Program Educational Objectives (PEOs) of a program that describes the expected achievements of graduates while completion of their graduation. Long term vision of the program outcome is to guide the students at National & International standards of the institutes. The below chosen PEO's lead to the selection of courses under different categories in B.Tech Biotechnology are as follows:

1. Practice engineering in a broad range of industrial, societal and real world applications.
2. Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.
3. Conduct themselves in a responsible, professional, and ethical manner.
4. Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

STUDENT OUTCOMES:

Student outcomes are the skills and knowledge which the students have at the time of graduation. These Outcomes are generic and are common to all engineering programs. The BTech programs at KL University are designed to meet the **Student Outcomes** as identified by Washington Accord. These constitute a superset of program outcomes identified by National Board of Accreditation.

- a. An ability to apply knowledge of mathematics, science, and engineering
- b. An ability to design and conduct experiments, as well as to analyze and interpret data
- c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d. An ability to function on multidisciplinary teams
- e. An ability to identify, formulate, and solve engineering problems
- f. An understanding of professional and ethical responsibility
- g. An ability to communicate effectively

- h. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- i. A recognition of the need for, and an ability to engage in life-long learning
- j. A knowledge of contemporary issues
- k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**K L UNIVERSITY
DEPARTMENT OF BIOTECHNOLOGY
PROGRAM DEVELOPMENT DOCUMENT
M.TECH BIOTECHNOLOGY
2012**

Vision of University:

To be a globally renowned university.

Mission of University:

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

Vision of Department:

To be a globally renowned leader in education, research and extension activities in emerging areas of biological engineering and related fields.

Mission of Department:

To train the leaders and innovators of tomorrow to establish as successful professionals to address global biotechnological requirements.

Program Educational Objectives

1. Illustrate the importance of techniques in bioengineering.
2. Illustrate practical application of various instrumentation methods in bioengineering sciences.
3. Understand the importance of professional and ethical issues in human and animal health.
4. Demonstrate the ability to work independently and in group in projects related to biosciences.

Program Outcome's

- a. Knowledge of basic and advanced concepts and techniques in bioengineering sciences.
- b. Practical and hands-on-training in various instrumentation methods and tools used in bioengineering.

- c. Knowledge of the applications of specific technologies or approaches leading to the design of a method or formulation.
- d. Knowledge of professional, ethical and societal issues in industry and research fields.
- e. Knowledge of work plan and management strategies related to the Science and Technology which includes data interpretation, preparing report, compilation and submission.

MAPPING OF PEOs with MISSION OF THE DEPARTMENT:

S.No	Description of PEOs	Key Components of Mission	
		M 2	M 3
		Training future professionals and innovators of tomorrow	Conducting fundamental and advanced research
PEO 1	Illustrate the importance of techniques in bioengineering.	✓	✓
PEO 2	Illustrate practical application of various instrumentation methods in bioengineering sciences.	✓	✓
PEO 3	Understand the importance of professional and ethical issues in human and animal health.		✓
PEO 4	Demonstrate the ability to work independently and in group in projects related to biosciences.	✓	✓

MAPPING OF POs/PSOs with PEOs:

	Key Components of POs and PSOs	Description of PEO			
		PEO 1	PEO 2	PEO 3	PEO 4
		Illustrate the importance of techniques in bioengineering.	Illustrate practical application of various instrumentation methods in bioengineering sciences.	Understand the importance of professional and ethical issues in human and animal health.	Demonstrate the ability to work independently and in group in projects related to biosciences.
a	Knowledge of basic and advanced concepts and techniques in bioengineering sciences.	✓	✓	✓	✓
b	Practical and hands-on-training in various instrumentation methods and tools used in bioengineering.	✓	✓		✓
c	Knowledge of the applications of specific technologies or approaches leading to the design of a method or	✓	✓		✓
d	Knowledge of professional, ethical and societal issues in industry and research fields.	✓		✓	✓
e	Knowledge of work plan and management strategies related to the Science and Technology which includes data interpretation, preparing report, compilation and submission	✓	✓		✓

K.L.UNIVERSITY
SCHOOL OF CIVIL AND MECHANICAL SCIENCES
Department of Civil Engineering

K L UNIVERSITY:

Vision

- To be a globally renowned university

Mission

- To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

VISION, MISSION, LONG TERM GOALS, SHORT TERM GOALS, PEO's PO's and GA's OF DEPARTMENT:

Vision

- To impart knowledge and excellence in Civil Engineering with global perspectives to the student community and to make them ethically strong engineers to build our nation.

Mission

- Our mission is to provide holistic development of student community to meet the ever changing needs of civil engineering industry and to be involved in forward looking research and consultancy useful to society.

B. Tech. - CIVIL ENGINEERING PROGRAMME

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

- To acquire, a strong foundation in basic sciences and technical knowledge, for successfully competing in executive positions and earn the highest qualification, in the field of Civil Engineering.
- To be a professional with high caliber in theoretical and practical applications in executing live projects with in-depth knowledge in CAD and analysis software packages.
- To possess strong application techniques with an understanding of multi-cultural, multi-linguistic, multi-disciplinary team work.
- To protect, sustainable development, environmental degradation and professional ethics.

PROGRAMME OUTCOMES (POs):

On completing the B. Tech. – Civil Engineering Programme successfully the students will exhibit the following capabilities:

- a. Knowledge in Mathematics, basic sciences, problem solving skills, practical experience to enter career growth related to civil engineering.
- b. Possessing practical knowledge in knowing the experiments that have to be conducted on site and in lab to ensure quality in construction.
- c. Be a designer and analytical expert to design various structures based on the need.

- d. Possessing field experience, design skills and abilities to shine as an independent Structural engineer / Foundation Engineer / Highway Engineer / Surveyor or any other specialization.
- e. Apply Computer Aided Design practices to generate plan and elevation of buildings / structures of any shape.
- f. Adopt new materials in the construction of buildings and other structures, without degrading the environment.
- g. Competency in using BIS codes, International Specifications, Handbooks, Manuals and appropriate software packages for the application of Disaster mitigation techniques.
- h. Understanding the three R's with respect to sustainable development and Environmental protection, i.e. Reduce, Reuse, and Recycle.
- i. Rendering consultancy services independently, with respect to Civil Engineering applications.
- j. Understanding the concepts of architectural needs, Socio economical issues and professional ethics as applicable to Civil Engineers.
- k. Knowledge of project management and finance management.

K L UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING
MAPPING OF PEOs vs. Mission Statement (Undergraduate)

		Mission Statement		
		To provide holistic development of student to meet the ever changing needs of civil engineering industry	To be involved in forward looking research	To be involved in consultancy useful to society
Programme Educational Objectives				
1	Practice engineering in a broad range of industrial, societal and real world applications.	√	√	√
2	Practice engineering in a broad range of industrial, societal and real world applications.	√	√	√
3	Practice engineering in a broad range of industrial, societal and real world applications.	√	√	√
4	Practice engineering in a broad range of industrial, societal and real world applications.	√		√

K L UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING
MAPPING OF POs vs. PEOs (Undergraduate)

		Programme Educational Objectives			
		Practice engineering in a broad range of industrial, societal and real world applications.	Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.	Conduct themselves in a responsible, professional, and ethical manner.	Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.
	Program Out Comes				
1	Ability to apply knowledge of mathematics, science, and engineering	√		√	
2	Ability to design and conduct experiments, as well as to analyze and interpret data	√			
3	Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and	√	√		

	sustainability				
4	Ability to function on multidisciplinary teams	√			
5	Ability to identify, formulate, and solve engineering problems	√	√		
6	Understanding of professional and ethical responsibility	√		√	√
7	Ability to communicate effectively	√			
8	Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	√		√	√
9	Recognition of the need for, and an ability to engage in life-long learning	√	√		
10	Knowledge of contemporary issues	√	√		
11	Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	√			

K.L.UNIVERSITY
SCHOOL OF CIVIL AND MECHANICAL SCIENCES
Department of Civil Engineering

K L UNIVERSITY:

Vision

- To be a globally renowned university

Mission

- To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

VISION, MISSION, LONG TERM GOALS, SHORT TERM GOALS, PEO's PO's and GA's OF DEPARTMENT:

Vision

- To impart knowledge and excellence in Civil Engineering with global perspectives to the student community and to make them ethically strong engineers to build our nation.

Mission

- Our mission is to provide holistic development of student community to meet the ever changing needs of civil engineering industry and to be involved in forward looking research and consultancy useful to society.

M. Tech. (Structural Engineering) - CIVIL ENGINEERING PROGRAMME

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

- Demonstrate knowledge in broad areas of Structural Engineering
- Demonstrate a depth of knowledge in a chosen/focus area of Structural Engineering
- Demonstrate knowledge of contemporary issues in their chosen/ focused area
- Demonstrate the ability to complete a technical project independently

PROGRAMME OUTCOMES (POs):

On completing the M. Tech. (Structural Engineering)–Civil Engineering Programme successfully the students will exhibit the following capabilities:

1. knowledge of a broad range of structural methodologies and underlying civil engineering, commonly used in the development and analysis of Structural Engineering systems.
2. Knowledge of fundamental design issues relevant to Structural Engineering and an understanding of how to formulate and analyse design solutions in various engineering contexts.
3. In-depth knowledge of one or more of the following (depending of selection of option modules and project area): specific engineering systems, design methods, modeling techniques.
4. Knowledge of basic research and development principles and practices relevant to main stream engineering industry.
5. Knowledge of key professional, safety and ethical issues arising in modern engineering industry.
6. Knowledge of time management and work planning issues related to the organization implementation and successful completion, including reporting, of an individual, masters level, Engineering based projects.

PROGRAMME SPECIFIC OUTCOMES (PSOs) - M. Tech. (Structural Engineering)

1. Function as design consultants in construction industry for the design of Civil Engineering structures.
2. Provide sustainable solutions to the Civil Engineering Problems.

K L UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING
MAPPING OF PEOs vs.Mission Statement (Structural Engineering)

		Mission Statement		
		To provide holistic development of student to meet the ever changing needs of civil engineering industry	To be involved in forward looking research	To be involved in consultancy useful to society
	Programme Educational Objectives	√	√	√
1	Demonstrate knowledge in broad areas of Structural Engineering	√	√	√
2	Demonstrate a depth of knowledge in a chosen/focus area of Structural Engineering	√	√	√
3	Demonstrate knowledge of contemporary issues in their chosen/ focused area.	√		√
4	Demonstrate the ability to complete a technical project independently	√	√	√

K L UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING
MAPPING OF POs vs. PEOs (Structural Engineering)

		Programme Educational Objectives			
		Demonstrate knowledge in broad areas of Structural Engineering	Demonstrate a depth of knowledge in a chosen/focus area of Structural Engineering	Demonstrate knowledge of contemporary issues in their chosen/focused area.	Demonstrate the ability to complete a technical project independently
Program Out Comes					
1	knowledge of a broad range of structural methodologies and underlying civil engineering, commonly used in the development and analysis of Structural Engineering systems	√	√		√
2	Knowledge of fundamental design issues relevant to Structural Engineering and an understanding of how to formulate and analyse design solutions in various engineering contexts	√	√		√
3	In-depth knowledge of one or more of the following (depending of selection of option modules and project area): specific engineering systems, design methods, modeling techniques	√	√		√
4	Knowledge of basic research and development	√	√		√

	principles and practices relevant to main stream engineering industry.				
5	Knowledge of key professional, safety and ethical issues arising in modern engineering industry.	√	√		√
6	Knowledge of time management and work planning issues related to the organization implementation and successful completion, including reporting, of an individual, masters level, Engineering based projects.	√	√		√
PSO1	Function as design consultants in construction industry for the design of civil engineering structures.	√	√		√
PSO2	Provide sustainable solutions to the Civil Engineering Problems.			√	

K L UNIVERSITY

DEPARTMENT OF COMMERCE

ACADEMIC YEAR 2013-14

UNIVERSITY VISION AND MISSION

Vision

To be a globally renowned university.

Mission :

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

DEPARTMENT OF COMMERCE VISION AND MISSION

Vision:-

To be a center for excellence and globally competitive in the core areas of accounting and finance.

Mission:-

1. To be involved in consultancy services in the areas of accounting, finance and taxation.
2. After examining the current need of the market the department is actively focusing on Summer internship and industrial training.

3. To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and responsible citizens with intrinsic values.

PEO'S

1. To produce best commerce (H) graduates in the country as well as in Global
2. To equip students with updated inputs in the field of accounting and finance
3. To provide practical explore as per corporate needs through summer intern ship and industrial training.

Program outcomes: -

PO1	An ability to apply knowledge of Accounting, Finance and Taxation
PO2	An ability to develop each graduate to be adept in identifying and understanding major commerce trends both locally and globally
PO3	An ability to develop each graduate to be a critical thinker and strong decision maker.
PO4	An ability to develop each graduate to be an effective and professional communicator.
PO5	An understanding of professional and ethical responsibility
PO6	Knowledge of contemporary issues.
PO7	A recognition of the need for and an ability to engage in life-long learning

PO-MISSION MAPPING

S.No	Description of PEOs	Key Components of Mission		
		M 1	M 2	M 3
		To be involved in consultancy services in the arias of accounting, finance and taxation	After examining the current need of the market the department is actively focusing on Summer internship and industrial training.	To impart quality higher education and to undertake research
PEO 1	To produce best commerce (H) graduates in the country as well as in Global	.	.✓	.✓
PEO 2	To equip students with updated inputs in the field of accounting and finance		✓	✓
PEO 3	To provide practical explore as per corporate needs through summer intern ship and industrial training.	✓		✓

PO		P E O		
		1	2	3
		To produce best commerce (H) graduates in the country as well as	To equip students with updated inputs in the field of accounting and	To provide practical explore as per corporate needs through summer
1	An ability to apply knowledge of Accounting, Finance and Taxation	YES	YES	YES
2	An ability to develop each graduate to be adept in identifying and understanding major commerce trends both	YES	YES	YES
3	An ability to develop each graduate to be a critical thinker and strong decision maker.	YES	YES	YES
4	An ability to develop each graduate to be an effective and professional communicator.	YES	YES	YES
5	An understanding of professional and ethical responsibility	YES	YES	YES
6	Knowledge of contemporary	YES	YES	YES
7	A recognition of the need for and an ability to engage in life-long	YES	YES	YES



K L University

(Koneru Lakshmaiah Education Foundation)

Deemed to be University, Estd. u/s 3 of UGC Act, 1956

Accredited by NAAC as 'A' Grade University - Approved by AICTE - ISO 9001-2008 Certified
Campus: Greenfields, Vaddeswaram -522502, Guntur District, Andhra Pradesh, INDIA.

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Vision statement of K L University

To be a globally renowned university.

Mission statement of K L University

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

Vision statement of CSE department

To be a department of International repute through continuous research, innovation and industry led curriculum.

Mission statement of CSE department

To Impart Quality Education with social consciousness and make them Globally Competent.

M1	Provide quality undergraduate and graduate education in both the theoretical computer science
M2	Train students to effectively apply this education to solve real-world problems

M3	Give students a competitive advantage in the ever-changing and challenging global work environment
M4	Conduct research to advance the state of the art in theoretical computer science and integrate results, innovations into other scientific disciplines

PROGRAM OBJECTIVES

PO1	an ability to apply knowledge of mathematics, science and engineering
PO2	an ability to identify, formulate, and solve engineering problems
PO3	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
PO4	an ability to design and conduct experiments, as well as to analyze and interpret data
PO5	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
PO6	the broad education necessary to understand the impact of engineering solutions

	in a global, economic, environmental, and societal context
PO7	a knowledge of contemporary issues
PO8	an understanding of professional and ethical responsibility
PO9	an ability to function on multidisciplinary teams
PO10	an ability to communicate effectively (3g1 orally, 3g2 written)
PO12	a recognition of the need for, and an ability to engage in life-long learning

PROGRAM EDUCATIONAL OBJECTIVES

PEO1	A. Practice engineering in a broad range of industrial, societal and real world applications.
PEO2	B. Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.
PEO3	C. Conduct themselves in a responsible, professional, and ethical manner.
PEO4	D. Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

Mapping of Mission statements with program educational objectives

	M1	M2	M3	M4
PEO1	✓	✓		
PEO2	✓			✓
PEO3		✓	✓	✓
PEO4			✓	

Mapping of PEOs with Pos and PSOs

	PEO1	PEO2	PEO3	PEO4
PO1	✓	✓		
PO2	✓	✓		
PO3				
PO4	✓			
PO5	✓			
PO6				
PO7	✓	✓	✓	✓
PO8			✓	✓
PO9	✓		✓	
PO10	✓		✓	✓
PO12				✓

K L UNIVERSITY
DEPARTMENT OF MECHANICAL ENGINEERING
PROGRAM DEVELOPMENT DOCUMENT
B.Tech in Electrical and Electronics Engineering
2013

Vision of the University

To be a globally renowned university.

Mission of the university:

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

VISION of the Department

To Produce globally renowned leader in education, extension activities and Carrying out research and technology development in frontier areas of electronics and electrical engineering and allied fields

MISSION of the Department

To produce quality electrical and electronics engineers having strong theoretical foundation, innovative, good design experience , exposure to research and development and responsible for social needs.

Program Educational Objectives

1. Apply their immense knowledge acquired in Electrical and Electronics Engineering with modern computational tools to serve the needs of ongoing research and industry
2. Apply their immense knowledge acquired in Electrical and Electronics Engineering with modern computational tools to pursue Higher Education.

3. Employ Leadership Qualities with professional and ethical values in effectively dealing with Societal Challenges.
4. Inculcate in students, Self and Lifelong Learning, effective interpersonal communication skills when working with multidisciplinary teams

Program Outcome's

- a. Ability to apply knowledge of mathematics, science, and engineering
- b. Ability to design and conduct experiments, as well as to analyze and interpret data
- c. Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d. Ability to function on multidisciplinary teams
- e. Ability to identify, formulate, and solve engineering problems
- f. Understanding of professional and ethical responsibility
- g. Ability to communicate effectively
- h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- i. Recognition of the need for, and an ability to engage in life-long learning
- j. Knowledge of contemporary issues
- k. Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

MAPPING OF PEOs with MISSION OF THE DEPARTMENT:

S.No.	Program Educational Objectives(PEOs)	M1	M2	M3	M4
1	Apply their immense knowledge acquired in Electrical and Electronics Engineering with modern computational tools to serve the needs of ongoing research and industry.		√	√	√
2	Apply their immense knowledge acquired in Electrical and Electronics Engineering with modern computational tools to pursue Higher Education.		√	√	√
3	Employ Leadership Qualities with professional and ethical values in effectively dealing with Societal Challenges.	√	√	√	
4	Inculcate in students, Self and Lifelong Learning, effective interpersonal communication skills when working with multidisciplinary teams.	√	√	√	

MAPPING OF POs/PSOs with PEOs:

Mapping of POs to PEOs					
S.No.	Program Objectives(POs)	Program Educational Objectives(PEOs)			
		1	2	3	4
a	An ability to apply knowledge of mathematics, science, and engineering	√	√		
b	An ability to design and conduct experiments, as well as to analyze and interpret data	√	√		
c	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	√	√	√	

d	An ability to function on multidisciplinary teams				√
e	An ability to identify, formulate, and solve engineering problems	√	√		
f	An understanding of professional and ethical responsibility			√	
g	An ability to communicate effectively				√
h	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	√	√	√	
i	A recognition of the need for, and an ability to engage in life-long learning				√
j	A knowledge of contemporary issues	√	√		
k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	√	√		
l	Project management and finance			√	

K L UNIVERSITY
DEPARTMENT OF ELECTRICAL ENGINEERING
PROGRAM DEVELOPMENT DOCUMENT
M.Tech in Power Electronics Specialization
2013

Vision of the University

To be a globally renowned university.

Mission of the university:

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

VISION of the Department

To Produce globally renowned leader in education, extension activities and Carrying out research and technology development in frontier areas of electronics and electrical engineering and allied fields

MISSION of the Department

To produce quality electrical and electronics engineers having strong theoretical foundation, innovative, good design experience , exposure to research and development and responsible for social needs.

Program Educational Objectives

Programme Educational Objectives:

- 1.To produce well trained post graduates in the domain of power electronics and electrical drives, and ensure that at least 50 % of those are employable in the diversified sectors of industry, public sector or multinational corporations.
2. To produce some of these (15-20 %) post graduates will pursue Ph.D.

3. To produce some of these will demonstrate the academic leadership in engineering institutions and serve the education.
4. To inculcate research attitude and lifelong learning among postgraduates

Program Outcome's

- a. apply the knowledge of science and mathematics in designing, analyzing and using the power converters and drives for various applications and problem solving
- b. design the modern electric machines, drives, power converters, and control circuits for specific application
- c. use modern tools, professional software platforms, embedded systems for the diversified applications
- d. Function as a member of a multidisciplinary team and correlate the domain knowledge with global problems.
- e. sense and demonstrates the communication at different levels effectively
- f. explore ideas for inculcating research skills and appreciate, critical and independent thinking and engage in lifelong learning

MAPPING OF PEOs with MISSION OF THE DEPARTMENT:

S.No	Program Educational Objectives(PEOs)	M1 Training the leaders of tomorro w	M2 Training the innovator s of tomorro w	M3 Training the outstanding career professiona ls of tomorrow	M4 Conductin g fundament al research
1	To produce well trained post graduates in the domain of power electronics drives, and ensure that at least 50 % of those are employable in the diversified sectors of industry, public sector or multinational corporations.	√	√	√	

2	To produce some of these (15-20 %) post graduates will pursue Ph.D.		√	√	√
3	. To produce some of these will demonstrate the academic leadership in engineering institutions and serve the education.	√	√	√	
4	To inculcate research attitude and lifelong learning among postgraduates		√	√	√

MAPPING OF POs/PSOs with PEOs:

Mapping of POs to PEOs					
S.No.	Program Objectives(POs)	Program Educational Objectives(PEOs)			
		1	2	3	4
a	apply the knowledge of science and mathematics in designing, analyzing and using the power converters and drives for various applications and problem solving	√	√	√	√
b	. design the modern electric machines, drives, power converters, and control circuits for specific application	√	√		√
c	use modern tools, professional software platforms, embedded systems for the diversified applications	√	√		√
d	Function as a member of a multidisciplinary team and correlate the domain knowledge with global problems.	√	√	√	√
e	sense and demonstrates the communication at different levels effectively	√		√	√
f	.explore ideas for inculcating research skills and appreciate, critical and independent thinking and engage in lifelong learning	√	√		√

K L UNIVERSITY
DEPARTMENT OF ELECTRICAL ENGINEERING
PROGRAM DEVELOPMENT DOCUMENT
M.Tech in POWER SYSTEM SPECIALIZATION
2013

Vision of the University

To be a globally renowned university.

Mission of the university:

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

VISION of the Department

To Produce globally renowned leader in education, extension activities and Carrying out research and technology development in frontier areas of electronics and electrical engineering and allied fields

MISSION of the Department

To produce quality electrical and electronics engineers having strong theoretical foundation, innovative, good design experience , exposure to research and development and responsible for social needs.

Program Educational Objectives

1. To produce electrical power systems postgraduates, who are employable in public and private industries /institutes /organizations or pursue higher education.
- 2 .To prepare postgraduates who have the ability to identify and address Current and future problems in the domain of power systems, power Electronics and electrical machines.

3. To inculcate research attitude and lifelong learning among postgraduates
4. To produce some of these will demonstrate the academic leadership in engineering institutions and serve the education.

Program Outcome's

- a. Acquire in- depth knowledge in the domain of power systems and understanding of engineering principles for project management.
- b. Ability to critically analyze various power system components, models and their operation.
- c. Ability to apply fundamentals and concepts to analyze, formulate and solve complex problems of electrical power systems and its components.
- d. Apply advanced concepts of electrical power engineering to analyze, design and develop electrical components, apparatus and systems to put forward scientific findings at national and international levels.
- e. Ability to use advanced techniques, skills and modern scientific and engineering tools for professional practice.
- f. Preparedness to lead a multidisciplinary scientific research team, communicate and lifelong learning effectively.

MAPPING OF PEOs with MISSION OF THE DEPARTMENT:

S.No	Program Educational Objectives(PEOs)	M1 Training the leaders of tomorro w	M2 Training the innovator s of tomorro w	M3 Training the outstanding career professiona ls of tomorrow	M4 Conductin g fundament al research
1	To produce electrical power systems postgraduates, who are employable in public and private industries /institutes /organizations or pursue higher education.		√	√	√
2	To prepare postgraduates who have the ability to identify and address Current and future problems in the domain of power systems, power Electronics and electrical machines.		√	√	√

3	To inculcate research attitude and lifelong learning among postgraduates and pursuing of Ph.D		√	√	√
4	To produce some of these will demonstrate the academic leadership in engineering institutions and serve the education	√	√	√	

MAPPING OF POs/PSOs with PEOs:

Mapping of POs to PEOs					
S.No.	Program Objectives(POs)	Program Educational Objectives(PEOs)			
		1	2	3	4
a	Acquire in- depth knowledge in the domain of power systems and understanding of engineering principles for project management.	√	√	√	
b	Ability to critically analyze various power system components, models and their operation	√	√	√	√
c	Ability to apply fundamentals and concepts to analyze, formulate and solve complex problems of electrical power systems and its components.	√	√	√	√
d	Apply advanced concepts of electrical power engineering to analyze, design and develop electrical components, apparatus and systems to put forward scientific findings at national and international levels	√	√	√	
e	Ability to use advanced techniques, skills and modern scientific and engineering tools for professional practice.		√	√	√
f	Preparedness to lead a multidisciplinary scientific research team, communicate and lifelong learning effectively	√		√	√

K L UNIVERSITY

DEPARTMENT OF ELECTRONICS AND COMPUTER SCIENCE ENGINEERING

2012

M.TECH (EMBEDDED SYSTEMS)

UNIVERSITY

Vision

To be a globally renowned university.

Mission

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

DEPARTMENT

VISION

To promote innovation centric education and perform cutting edge research in interdisciplinary and multidisciplinary areas.

MISSION

To impart **value-based, state-of-art education** and motivate the students to become **socially committed professionals** for **overall development** of students

M1: Impart Value –Based Education

M2: Impart State of the art –education

M3: Motivate Students to become Socially Committed Professionals

M4: Overall Development of Students

PROGRAM EDUCATIONAL OBJECTIVES (PEOS) :

M. Tech. in Embedded Systems Program, graduates will be able to

PEO1: To mould the students to become effective global engineering students in the competitive environment of modern society.

PEO2: To develop communication, analytical, decision-making, motivational, leadership, problem solving and human relations skills of the students.

PEO3: To pursue lifelong learning as a means of enhancing knowledge and skills necessary to contribute to the betterment of profession.

PEO'S AND MISSION STATEMENT MAPPING

	M1	M2	M3	M4
PEO1		√		√
PEO2	√	√	√	√
PEO3	√		√	√

PROGRAM OUTCOMES(PO's)

M. Tech. in Embedded Systems Program, Graduates will be able to:

PO1: To demonstrate the skills to meet the current and future industrial challenges in the field of embedded systems engineering.

PO2: Able to create, develop, apply, and disseminate knowledge within the embedded systems development environment.

PO3: Ability to communicate effectively and professionally.

PO4: Develop professional and ethical attitude and become socially responsible citizens.

PO5: Ability to carry out cutting edge research in the emerging areas of Embedded Systems.

PO6: Demonstrate their role as engineers or entrepreneurs and contribute to the society.

MAPPING OF PEO's WITH PROGRAM OUTCOMES (PO'S)

	PEO1	PEO2	PEO3
PO1	√		√
PO2	√	√	
PO3	√		
PO4		√	
PO5	√		√
PO6	√	√	

K L UNIVERSITY

DEPARTMENT OF ELECTRONICS AND COMPUTER SCIENCE ENGINEERING

2013

M.TECH (WIRELESS COMMUNICATIONS AND SENSOR NETWORKS)

VISION

To promote innovation centric education and perform cutting edge research in interdisciplinary and multidisciplinary areas.

MISSION

To impart **value-based, state-of-art education** and motivate the students to become **socially committed professionals** for **overall development** of students

M1: Impart Value –Based Education

M2: Impart State of the art –education

M3: Motivate Students to become Socially Committed Professionals

M4: Overall Development of Students

PROGRAM EDUCATIONAL OBJECTIVES (PEOS) :

M. Tech. in Wireless Communications and Sensor Networks Program, graduates will be able to

PEO1: To mould the students to become effective global engineering students in the competitive environment of modern society.

PEO2: To develop communication, analytical, decision-making, motivational, leadership, problem solving and human relations skills of the students.

PEO3: To pursue lifelong learning as a means of enhancing knowledge and skills necessary to contribute to the betterment of profession.

EO'S AND MISSION STATEMENT MAPPING

	M1	M2	M3	M4
PEO1		√		√
PEO2	√	√	√	√
PEO3	√		√	√

PROGRAM OUTCOMES(PO's)

M. Tech. in in Wireless Communications and Sensor Networks Program, Graduates will be able to:

PO1: To demonstrate the skills to meet the current and future industrial challenges in the field of Wireless communications and Sensor Networks.

PO2: Able to create, develop, apply, and disseminate knowledge within the Wireless Sensor Networks development environment.

PO3: Ability to communicate effectively and professionally.

PO4: Develop professional and ethical attitude and become socially responsible citizens.

PO5: Ability to carry out cutting edge research in the emerging areas of Wireless communications and Sensor Networks.

PO6: Demonstrate their role as engineers or entrepreneurs and contribute to the society.

MAPPING OF PEO's WITH PROGRAM OUTCOMES (PO'S)

	PEO1	PEO2	PEO3
PO1	√		√
PO2	√	√	
PO3	√		
PO4		√	
PO5	√		√
PO6	√	√	

K L UNIVERSITY

DEPARTMENT OF ELECTRONICS AND COMPUTER SCIENCE ENGINEERING

2013

UNIVERSITY

Vision

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Mission

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DEPARTMENT

VISION

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MISSION

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M1: Impart Value –Based Education

M2: Impart State of the art –education

M3: Motivate Students to become Socially Committed Professionals

M4: Overall Development of Students

PROGRAM EDUCATIONAL OBJECTIVES (PEOS) :

PEO1: Practice engineering in a broad range of industrial, societal and real world applications.

PEO2: Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.

PEO3: Conduct themselves in a responsible, professional, and ethical manner.

PEO4: Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

STUDENT OUTCOMES(SOs)

(a) an ability to apply knowledge of mathematics, science, and engineering

(b) an ability to design and conduct experiments, as well as to analyze and interpret data

(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

(d) an ability to function on multidisciplinary teams

(e) an ability to identify, formulate, and solve engineering problems

(f) an understanding of professional and ethical responsibility

(g) an ability to communicate effectively

(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

(i) a recognition of the need for, and an ability to engage in life-long learning

(j) a knowledge of contemporary issues

(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

PEOSVS MISSION MAPPING

	M1	M2	M3	M4
PEO1	√	√		√
PEO2		√		√
PEO3			√	√
PEO4			√	√

STUDENT OUTCOMES (SOS) VS PEOS MAPPING

SO'S	PEO1	PEO2	PEO3	PEO4
a	√	√		
b	√	√		
c	√	√		
d		√		√
e	√	√		
f			√	√
g		√	√	√
h		√	√	√
i	√	√	√	
j	√	√	√	√
k	√	√	√	



K L UNIVERSITY

Department of Hotel Management

Green Fields, Vaddeswaram, (via) K.C. Works P.O. - 522 502, Guntur District,
Phones: 08645-246948, 246615 FAX: 08645-247249, 0866-2577902
Constituent College KLCE Accredited by NAAC with A - Grade
Approved by A.I.C.T.E. Accredited by N.B.A. ISO 9001-2000 Certified

UNIVERSITY

Vision

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Mission:

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DEPARTMENT VISION

To create a platform to sculpture the learner's too professional by binding innovative, international standardized education with leadership, entrepreneur skills and applied research.

DEPARMENT MISSION

1. To simplify the hospitality education.
2. To provide effective learning through goal orientation in promoting innovative skills.
3. To create entrepreneurs with international industrial standards.
4. To collaborate with national & international hospitality organizations.



K L UNIVERSITY

Department of Hotel Management

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PROGRAM EDUCATION OBJECTIVES (PEO's)

1. Make students to be leaders in hospitality industry through industry immersion and national and international linkages in order to support business in the field of relevance.
2. To intensify student`s knowledge and skills with instruction based on international standards, to produce quality graduates with balanced knowledge, skills and industry exposure in catering, hotel and management.
3. Inculcate leadership skills needed for integration of hotel and restaurant development, to demonstrate community involvement in travel and tour operation, airlines and other related industries to strengthen their knowledge and skills.

PROGRAM OUTCOMES (PO's)

- a. Knowledge of techniques and equipment for planting, growing, and harvesting food products (both plant and animal) for consumption, including storage/handling techniques.
- b. Knowledge of raw materials, production processes, quality control, costs, hygiene and sanitation and other techniques for maximizing the effective manufacture and distribution of goods.
- c. Knowledge of business and management principles involved effectively in strategic planning, resource allocation, human resources modelling, leadership technique, production methods, and coordination of people and resources.
- d. Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction
- e. Knowledge of economic and accounting principles and practices, the financial markets, banking, analysis and reporting of financial data involved in industrial sectors.
- f. Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labour relations and negotiation, and personnel information systems.

- g. Knowledge of the structure and content of different language including the meaning and spelling of words, rules of composition, and grammar.
- h. Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.
- i. Knowledge of principal methods of cleaning, controlling, recycling process, maintenance of equipment's, latest technology and its usage, safety measures to taken in hotel industry.
- j. Knowledge on Tourism, hospitality industry history, sales, promotions, Audit, general knowledge, share market, excellent skill to communicate and computer knowledge.



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PEO's - MISSION

PEO's	To simplify the hospitality education (M 1)	To provide effective learning through goal orientation in promoting innovative skills (M 2)	To create entrepreneurs with international industrial standards (M 3)	To collaborate with national & international hospitality organizations (M 4)
Make students to be leaders in hospitality industry through industry immersion and national and international linkages in order to support business in the field of relevance.	✓			
To intensify student's knowledge and skills with instruction based on international standards, to produce quality graduates with balanced knowledge, skills and industry		✓	✓	

exposure in catering, hotel and management.				
Inculcate leadership skills needed for integration of hotel and restaurant development, to demonstrate community involvement in travel and tour operation, airlines and other related industries to strengthen their knowledge and skills.			✓	✓



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PO's – PEO's MATRIX

PO's	PEO - 1	PEO - 2	PEO -3
a	✓		
b		✓	
c		✓	
d	✓		
e			✓
f			✓

g		✓	
h			✓
i	✓		
j			✓

K L UNIVERSITY
DEPARTMENT OF MECHANICAL ENGINEERING
PROGRAM DEVELOPMENT DOCUMENT
M.Tech in Thermal Engineering
2013

Vision of University:

To be a globally renowned university.

Mission of University:

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

Vision of Department:

To be a globally renowned leader in education, research and extension activities in emerging areas of mechanical engineering and allied fields.

Mission of Department:

Training the leaders, innovators and outstanding career professionals of tomorrow and conducting fundamental research to address major technological roadblocks.

Program Educational Objectives

1. Demonstrate a breadth of knowledge of Thermal Engineering.

2. Demonstrate a depth of knowledge in a chosen focus area, inside or outside of Thermal Engineering.
3. Demonstrate knowledge of contemporary issues in their chosen focused area
4. Demonstrate the ability to independently complete a technical project.

Program Outcome's

- a. Advanced knowledge of a broad range of modelling methodologies, and underlying mechanical science, commonly used in the development and analysis of Thermal engineering systems.
- b. Knowledge of fundamental design issues relevant to Thermal engineering, and an understanding of how to formulate and analyse design solutions in various engineering contexts.
- c. Working knowledge of a range of modern mathematical methods and tools used in the development and analysis of Thermal engineering systems.
- d. In-depth knowledge of one or more of the following (depending of selection of option modules and project area): specific engineering systems, design methods, modelling techniques, mathematical and/or numerical techniques.
- e. Knowledge of basic research and development principles and practices relevant to mainstream engineering industry.
- f. Knowledge of key professional, safety and ethical issues arising in modern engineering industry.
- g. Knowledge of time-management and work planning issues related to the organisation, implementation and successful completion, including reporting, of an individual, Masters level, engineering based project.

MAPPING OF PEOs with MISSION OF THE DEPARTMENT:

S.No	Description of PEOs	Key Components of Mission			
		M 1	M 2	M 3	M4
		Training the leaders of tomorrow	Training the innovators of tomorrow	Training the outstanding career professionals of tomorrow	Conducting fundamental research
PEO 1	Demonstrate a breadth of knowledge of Thermal Engineering			✓	✓
PEO 2	Demonstrate a depth of knowledge in a chosen focus area, inside or outside of Thermal Engineering			✓	✓
PEO 3	Demonstrate knowledge of contemporary issues in their chosen focused area	✓	✓	✓	✓
PEO 4	Demonstrate the ability to independently complete a technical project	✓	✓	✓	✓

MAPPING OF POs/PSOs with PEOs:

	Key Components of POs and PSOs	Description of PEO			
		Demonstrate a breadth of knowledge of Thermal Engineering	Demonstrate a depth of knowledge in a chosen focus area, inside or outside of Thermal Engineering	Demonstrate knowledge of contemporary issues in their chosen focused area	Demonstrate the ability to independently complete a technical project
		PEO 1	PEO 2	PEO 3	PEO 4
a	Advanced knowledge of a broad range of modelling	✓	✓		✓
b	Knowledge of fundamental design issues relevant to Thermal engineering	✓	✓	✓	✓
c	Working knowledge of a range of modern mathematical methods and tools	✓	✓	✓	✓
d	In-depth knowledge of specific engineering systems, design methods, modelling techniques, mathematical and/or numerical techniques.	✓	✓	✓	✓

e	Knowledge of basic research and development principles and	✓	✓	✓	✓
f	Knowledge of key professional, safety and ethical issues			✓	✓
g	Knowledge of time-management and work planning issues related to the organisation				✓

K L UNIVERSITY
DEPARTMENT OF MECHANICAL ENGINEERING
PROGRAM DEVELOPMENT DOCUMENT
M.Tech in Mechatronics
2012

Vision of University:

To be a globally renowned university.

Mission of University:

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

Vision of Department:

To be a globally renowned leader in education, research and extension activities in emerging areas of mechanical engineering and allied fields.

Mission of Department:

Training the leaders, innovators and outstanding career professionals of tomorrow and conducting fundamental research to address major technological roadblocks.

Program Educational Objectives

5. Demonstrate a breadth of knowledge of Mechatronics.

6. Demonstrate a depth of knowledge in a chosen focus area, inside or outside of Mechatronics.
7. Demonstrate knowledge of contemporary issues in their chosen focused area
8. Demonstrate the ability to independently complete a technical project

Program Outcome's

- f. Advanced knowledge of a broad range of modelling methodologies, and underlying mechanical science, commonly used in the development and analysis of mechatronic engineering systems.
- g. Knowledge of fundamental design issues relevant to mechatronic engineering, and an understanding of how to formulate and analyse design solutions in various engineering contexts.
- h. Working knowledge of a range of modern mathematical methods and tools used in the development and analysis of mechatronic engineering systems.
- i. In-depth knowledge of one or more of the following (depending of selection of option modules and project area): specific engineering systems, design methods, modelling techniques, mathematical and/or numerical techniques.
- j. Knowledge of basic research and development principles and practices relevant to mainstream engineering industry.
- k. Knowledge of key professional, safety and ethical issues arising in modern engineering industry.
- l. Knowledge of time-management and work planning issues related to the organisation, implementation and successful completion, including reporting, of an individual, Masters level, engineering based project.

MAPPING OF PEOs with MISSION OF THE DEPARTMENT:

S.No	Description of PEOs	Key Components of Mission			
		M 1	M 2	M 3	M 4
		Training the leaders of tomorrow	Training the innovators of tomorrow	Training the outstanding career professionals of tomorrow	Conducting fundamental research
PEO 1	Demonstrate a breadth of knowledge of Mechatronics.			✓	✓
PEO 2	Demonstrate a depth of knowledge in a chosen focus area, inside or outside of Mechatronics			✓	✓
PEO 3	Demonstrate knowledge of contemporary issues in their chosen focused area	✓	✓	✓	✓
PEO 4	Demonstrate the ability to independently complete a technical project	✓	✓	✓	✓

MAPPING OF POs/PSOs with PEOs:

	Key Components of POs and PSOs	Description of PEO			
		Demonstrate a breadth of knowledge of Mechatronics	Demonstrate a depth of knowledge in a chosen focus area, inside or outside of Mechatronics	Demonstrate knowledge of contemporary issues in their chosen focused area	Demonstrate the ability to independently complete a technical project
		PEO 1	PEO 2	PEO 3	PEO 4
a	Advanced knowledge of a broad range of modelling methodologies	✓	✓		✓
b	Knowledge of fundamental design issues relevant to mechatronic engineering	✓	✓	✓	✓
c	Working knowledge of a range of modern mathematical methods and tools	✓	✓	✓	✓
d	In-depth knowledge of specific engineering systems, design methods, modelling techniques, mathematical and/or numerical techniques.	✓	✓	✓	✓
e	Knowledge of basic research and development principles and practices	✓	✓	✓	✓

f	Knowledge of key professional, safety and ethical issues			✓	✓
g	Knowledge of time-management and work planning issues related to the				✓

K L UNIVERSITY
DEPARTMENT OF MECHANICAL ENGINEERING
PROGRAM DEVELOPMENT DOCUMENT
B.Tech in Mechanical Engineering
2013

Vision of University:

To be a globally renowned university.

Mission of University:

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

Vision of Department:

To be a globally renowned leader in education, research and extension activities in emerging areas of mechanical engineering and allied fields.

Mission of Department:

Training the leaders, innovators and outstanding career professionals of tomorrow and conducting fundamental research to address major technological roadblocks.

Program Educational Objectives

1. Practice Engineering in a broad range of industrial, societal and real world applications.

2. Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.
3. Conduct themselves in a responsible, professional, and ethical manner.
4. Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

Program Outcome's

- l. Ability to apply knowledge of mathematics, science, and engineering
- m. Ability to design and conduct experiments, as well as to analyze and interpret data
- n. Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- o. Ability to function on multidisciplinary teams
- p. Ability to identify, formulate, and solve engineering problems
- q. Understanding of professional and ethical responsibility
- r. Ability to communicate effectively
- s. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- t. Recognition of the need for, and an ability to engage in life-long learning
- u. Knowledge of contemporary issues
- v. Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

MAPPING OF PEOs with MISSION OF THE DEPARTMENT:

S.No	Description of PEOs	Key Components of Mission			
		M 1	M 2	M 3	M 4
		Training the leaders of tomorrow	Training the innovators of tomorrow	Training the outstanding career professionals of tomorrow	Conducting fundamental research
PEO 1	Practice Engineering in a broad range of industrial, societal and real world applications	.	.✓	.✓	
PEO 2	Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers		✓		✓
PEO 3	Conduct themselves in a responsible, professional, and ethical manner	✓			
PEO 4	Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world	✓		✓	✓

MAPPING OF POs/PSOs with PEOs:

	Key Components of POs and PSOs	Description of PEO			
		Practice Engineering in a broad range of industrial, societal and real world applications	Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.	Conduct themselves in a responsible, professional, and ethical manner.	Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.
		PEO 1	PEO 2	PEO 3	PEO 4
a	Engineering knowledge	✓	✓		✓
b	Conduct investigations of complex problems	✓	✓		✓
c	Design/ development of	✓	✓		✓
d	Individual and team work	✓	✓	✓	✓
e	Problem analysis	✓	✓		✓
f	Ethics	✓	✓	✓	✓
g	Communication	✓	✓	✓	✓

h	The engineer and society	✓	✓	✓	✓
i	Modern tool usage	✓	✓		✓
j	Lifelong learning	✓	✓	✓	✓
k	Environment and sustainability	✓	✓	✓	✓