

DEPARTMENT OF CIVIL ENGINEERING

Part B

Program Level Criteria

Criterion 1

Vision, Mission, Program Educational Objectives

DEPARTMENT OF CIVIL ENGINEERING

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (50)

1.1 State the Vision and Mission of the Department and Institution (5)

Vision of the Institute

Equipping young people with a comprehensive education and cutting-edge skills so they can contribute significantly to the state and country.

Mission of the Institute

Mission No	Mission Statement
M1	To produce technically proficient engineers with moral and ethical principles by offering professional education.
M2	To educate students and equip them with cutting-edge tools to tackle issues facing business and society.
M3	To inspire learners to love education and do their best to improve their mental, social, and physical well-being.

Vision of the Department

To build a learning environment in Civil Engineering that imparts strong fundamental knowledge and practical skills, empowering students with modern tools and technologies to meet the ever-changing needs of the profession. The department aspires to liberate young minds through higher education, earn the trust of society by producing competent and ethical civil engineers, and contribute to the sustainable development of the locality and the nation

Mission of the Department

Mission No	Mission Statement
M1	To Produce Civil Engineers of high caliber, Technical skills and ethical values to serve the society and industry.
M2	To Promote innovative thinking in the budding engineers to face the challenges of the future.
M3	To instill a sense of professional responsibility and ethical practices in students, ensuring they understand the impact of their work on society and the environment
M4	To foster relationships with local industries and communities, providing students with opportunities for real-world learning experiences and contributions to local technological advancements.

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1.2 State the Program Educational Objectives (PEOs) (5)

PEO No.	Program Educational Objectives Statements
PEO1	To prepare students to excel in under Graduates programmes and to succeed as a successful Civil Engineer to take up professional challenges through training during the programme.
PEO2	Under Graduates will apply their problem-solving and critical-thinking abilities to analyse and resolve technical issues in various Civil Engineering applications, ensuring reliability and efficiency.
PEO3	Under Graduates will possess the practical and hands-on experience necessary to excel in entry-level positions in the field of Civil engineering with the ability to apply theoretical knowledge to real-world scenarios.
PEO4	Under Graduates will exhibit leadership qualities and the ability to work effectively in multidisciplinary teams, contributing to the successful completion of projects and initiatives.

1.3 Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

"The Vision, Mission, and PEOs have been effectively communicated through various channels, as outlined below:

Publication Channels:

- ❖ Official College Website: <https://gplakhisarai.in/>
- ❖ Dedicated Department Webpage on the College Website: <https://www.gplakhisarai.in/VisionofCivilDept.aspx>
- ❖ Department Newsletter
- ❖ Laboratory Manuals
- ❖ Course Files
- ❖ Lab Record Copy

Dissemination Points:

- ❖ Faculty and Staff Rooms
- ❖ Department Corridors
- ❖ Classroom Environments
- ❖ Laboratories
- ❖ Departmental Notice Board

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1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (15)

The process for defining the Vision and Mission of the Department and PEOs of the program:

Initial Input Gathering: The starting point is to consider the Vision and Mission statements of the institute as the primary input.

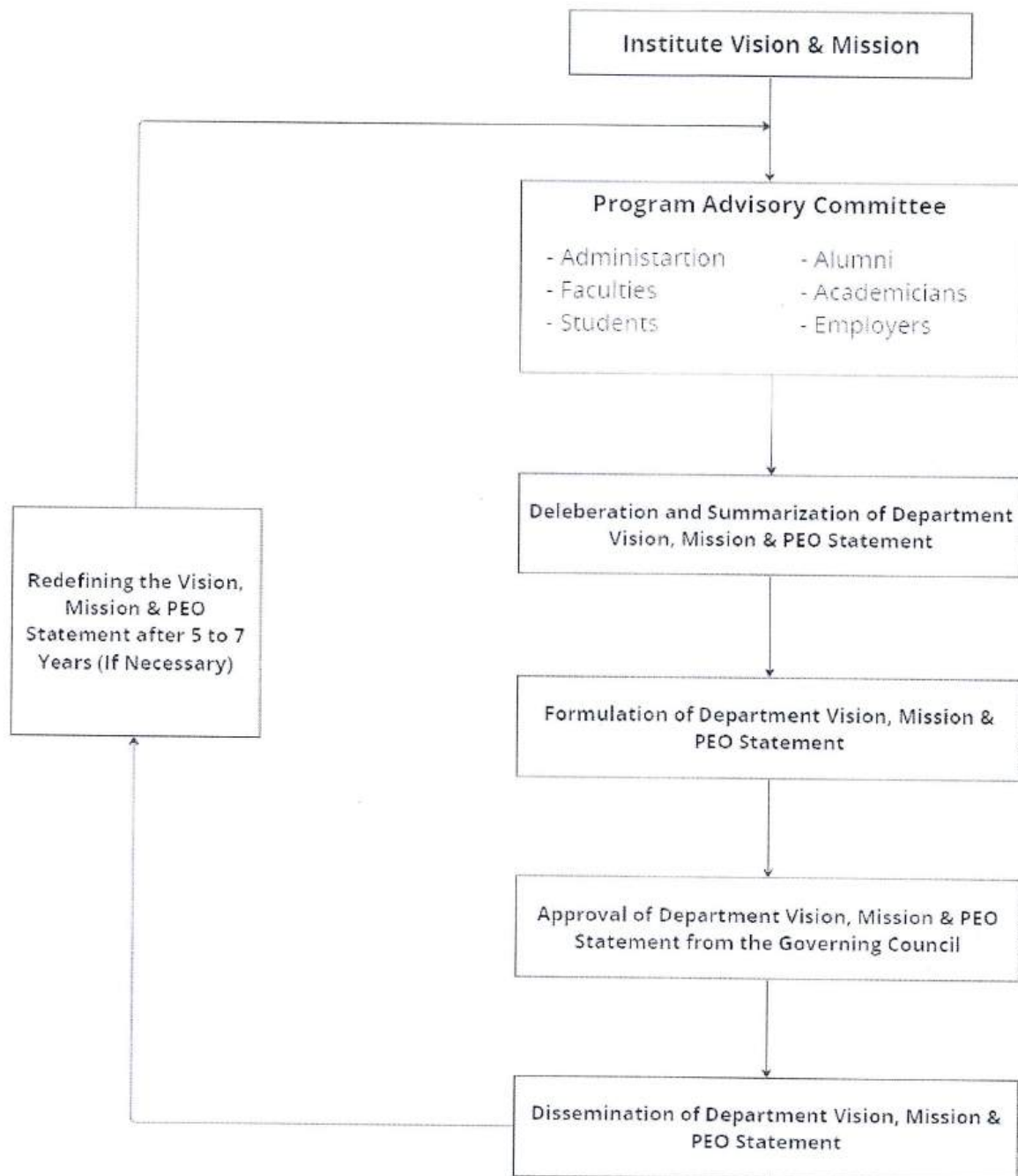
Stakeholder Involvement: Inputs are gathered from a range of stakeholders, both internal and external. This includes input from internal stakeholders such as management, faculty, and students, as well as external stake.

Deliberation and Summarization: The next step involves careful deliberation and summarization of the department's vision, mission and the Program Educational Objectives (PEOs). This is based on the valuable input received during Program Advisory Committee (PAC) meetings.

Finalization and Approval: Once the departments Vision, Mission and PEOs have been refined based on stakeholder input, they are finalized. The Final Statements are then presented for the approval from the Governing and Mission and PEOs are disseminated to all relevant stakeholders.


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1.5 Establish Consistency of PEOs with Mission of the Department (15)

PEO_s-MISSION CORRELATION MATRIX

Mission Statements-

M1. To produce Civil Engineers of high calibre, with technical skills and ethical values to serve society and industry.

M2. To promote innovative thinking in the budding engineers to face the challenges of the future.

M3. To instil a sense of professional responsibility and ethical practices in students, ensuring they understand the impact of their work on society and the environment.

M4. To foster relationships with local industries and communities, providing students with opportunities for real-world learning experiences and contributions to local technological advancements.

Program Educational Objectives (PEOs)-

PEO1. To prepare students to excel in undergraduate programmes and to succeed as successful Civil Engineers to take up professional challenges through training during the programme.

PEO2. Under Graduates will apply their problem-solving and critical-thinking abilities to analyse and resolve technical issues in various Civil Engineering applications, ensuring reliability and efficiency.

PEO3. Under Graduates will possess the practical and hands-on experience necessary to excel in entry-level positions in the field of Civil Engineering with the ability to apply theoretical knowledge to real-world scenarios.

PEO4. Under Graduates will exhibit leadership qualities and the ability to work effectively in multidisciplinary teams, contributing to the successful completion of projects and initiatives.

Correct PEO–Mission Correlation Matrix-

PEOs	M1	M2	M3	M4
PEO1	H – 3	M – 2	H – 3	M – 2
PEO2	H – 3	H – 3	M – 2	M – 2
PEO3	H – 3	M – 2	M – 2	H – 3
PEO4	M – 2	H – 3	H – 3	H – 3

H (High) = 3 M (Medium) = 2 L (Low) = 1

Basis for Correlation

PEO1: PEO1 has a High correlation with M1 and M3 because professional success as a Civil Engineer requires technical competence, ethical values and professional responsibility. Its relationship with innovation and industry/community exposure is moderate.

PEO2: PEO2 has a High correlation with M1 and M2 because technical problem-solving and critical thinking directly support technical competence and innovative thinking. Its contribution to professional responsibility and industry/community learning is moderate.

PEO3: PEO3 has a High correlation with M1 and M4 because practical and hands-on Civil Engineering experience directly develops technical competence and real-world/industry-oriented learning. Its links with innovation and professional responsibility are moderate.

PEO4: PEO4 has a High correlation with M2, M3 and M4 because leadership and multidisciplinary teamwork encourage innovative solutions, professional responsibility, ethical behavior and effective interaction with industry and community. Its correlation with M1 is moderate.

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GOVT. POLYTECHNIC LAKHISARAI

1.1.A
Vision
Statement

The Vision of the Govt. Polytechnic Lakhisarai:

“Equipping young people with a comprehensive education and cutting-edge skills so they can contribute significantly to the state and country.”.

The Mission of Govt. Polytechnic Lakhisarai:

M1: To produce technically proficient engineers with moral and ethical principles by offering professional education.

M2: To educate students and equip them with cutting-edge tools to tackle issues facing business and society.

M3: To inspire learners to love education and do their best to improve their mental, social, and physical well-being.

The Vision of the department of Civil Engineering is:

To build a learning environment in Civil Engineering that imparts strong fundamental knowledge and practical skills, empowering students with modern tools and technologies to meet the ever-changing needs of the profession. The department aspires to liberate young minds through higher education, earn the trust of society by producing competent and ethical civil engineers, and contribute to the sustainable development of the locality and the nation

The Mission of Civil Engineering Department is:

M1- To Produce Civil Engineers of high caliber, Technical skills and ethical values to serve the society and industry.

M2- To Promote innovative thinking in the budding engineers to face the challenges of the future.

M3 - To instill a sense of professional responsibility and ethical practices in students, ensuring they understand the impact of their work on society and the environment

M4- To foster relationships with local industries and communities, providing students with opportunities for real-world learning experiences and contributions to local technological advancements.

Program Educational Objectives (PEOs)

The Program Educational Objectives (PEOs) of Civil Engineering Department are given below:

PEO 1- To prepare students to excel in under Graduates programmes and to succeed as a successful Civil Engineer to take up professional challenges through training during the programme.

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PEO 2- Under Graduates will apply their problem-solving and critical-thinking abilities to analyse and resolve technical issues in various Civil Engineering applications, ensuring reliability and efficiency.

PEO 3- Under Graduates will possess the practical and hands-on experience necessary to excel in entry-level positions in the field of Civil engineering with the ability to apply theoretical knowledge to real-world scenarios.

PEO 4- Under Graduates will exhibit leadership qualities and the ability to work effectively in multidisciplinary teams, contributing to the successful completion of projects and initiatives.

PSOs (Program specific outcome)

PSO1- Students will be able to **perform basic laboratory tests** on soil, cement, aggregates, and concrete to ensure quality control in **local construction activities** and public works.

PSO2- Ability to **prepare drawings, estimates, and simple designs** for houses, culverts, local roads, water tanks, and drainage systems, considering **local soil type and climatic conditions** of the district.

Program outcomes of Diploma in CivilEngg. Program

PO1: Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

PO2: Problem analysis: Identify and analyse well-defined engineering problems using codified standard methods.

PO3: Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

PO4: Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

PO5: Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

PO6: Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

PO7: Life-long learning: Ability to analyse individual needs and engage in updating in the context of technological changes.

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- (ii) Vision and Mission of the Department were finalized and are being reproduced below

Department of Civil Engineering

Vision

To build a learning environment in Civil Engineering that imparts strong fundamental knowledge and practical skills, empowering students with modern tools and technologies to meet the ever-changing needs of the profession. The department aspires to liberate young minds through higher education, earn the trust of society by producing competent and ethical civil engineers, and contribute to the sustainable development of the locality and the nation

Mission

M1: To Produce Civil Engineers of high caliber, Technical skills and ethical values to serve the society and industry.

M2: To Promote innovative thinking in the budding engineers to face the challenges of the future.

M3: To instill a sense of professional responsibility and ethical practices in students, ensuring they understand the impact of their work on society and the environment.

M4: To foster relationships with local industries and communities, providing students with opportunities for real-world learning experiences and contributions to local technological advancements.

Department of Mechanical Engineering

Vision

To be known as per premier department of Mechanical Engineering in technical education and application of knowledge & skills to the benefit of the society.

Mission

M1- To develop state-of-the-art teaching learning facilities to interpret, apply, disseminate and create knowledge.

M2- To be dynamic, innovative and flexible in devising programs, structures and mechanisms to cope with the changes.

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5). If the Committee feels that the desired objective can be met by modifying the curriculum, then the recommendation of the committee will be forwarded to SBTE for necessary action.

(iv) PEOs/PSOs of the Department was finalized and are being reproduced below

Department of Civil Engineering

Programme Educational Objective (PEOs)

PEO 1- To prepare students to excel in under Graduates programmes and to succeed as a successful Civil Engineer to take up professional challenges through training during the programme.

PEO 2- Under Graduates will apply their problem-solving and critical-thinking abilities to analyse and resolve technical issues in various Civil Engineering applications, ensuring reliability and efficiency.

PEO 3- Under Graduates will possess the practical and hands-on experience necessary to excel in entry-level positions in the field of Civil engineering with the ability to apply theoretical knowledge to real-world scenarios.

PEO 4- Under Graduates will exhibit leadership qualities and the ability to work effectively in multidisciplinary teams, contributing to the successful completion of projects and initiatives.

Department of Mechanical Engineering

Programme Educational Objectives (PEOs)

PEO1- To prepare the students to lead a successful career in industries or to pursue higher studies or to support entrepreneurial endeavors.

PEO2- To build the potential of the students to bridge the gap between industry and academia with skills and innovations.

PEO3- To prepare the students to address social, technical and engineering challenges ethically.

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Department of Electronics Engineering

PEOs (Program educational objectives)

PE01: Apply basic principles of electronics to analyse and design the basic electronic circuits and system for various applications.

PE02: Proficiency in basic programming language, embedded systems, and their use in automation and control.

PE03: Graduates will be able to adapt to new technology and continuously improve their abilities, with an ethical approach to lifelong learning.

Department of Electrical Engineering

PEOs (Program educational objectives)

PE01: Build successful careers in Electrical Engineering and related fields, delivering innovative and effective solutions to complex challenges.

PE02: Pursue entrepreneurship and seek advanced education opportunities to enhance their expertise.

PE03: Commit to lifelong learning by utilizing cutting-edge technologies to address societal issues, employing logical and adaptive decision-making strategies.

Department of Civil Engineering

Programme Specific Outcomes (PSOs)

PSO1:- Students will be able to perform basic laboratory tests on soil, cement, aggregates, and concrete to ensure quality control in local construction activities and public works.

PSO2:- Ability to prepare drawings, estimates, and simple designs for houses, culverts, local roads, water tanks, and drainage systems, considering local soil type and climatic conditions of the district.

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