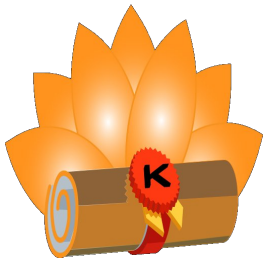
www.kamaldnp.com



KAMALDNP

kamaldnp.com

PDF created by Raj Kamal using AI

Project (Major Project) — Complete Syllabus

BTEUP Diploma in Mechanical Engineering (Production) • 6th Semester • Session 2026–27

Subject 6.1 (Practical) • Total 400 Marks • 12 Credits • L 0 – P 24

About this subject: the Major Project is the biggest single subject in the diploma — 24 practical periods a week, 12 credits, 400 marks (240 internal, 160 external, 3-hour practical examination). **The project selected in the 5th semester will be continued in the 6th semester.** You work in a group of 4 to 5 students, guided by a teacher, and are assessed on attendance, two progress presentations, the project model with final presentation, and the report. There is no theory paper.

Examination Scheme

Code	Paper	Type	L – P	Credits	Internal	External	Total
6.1	Project	Practical	0 – 24	12	Practical 240	Practical 160 (3 hrs)	400
Project Total				**12**	**240**	**160**	**400**

What This Subject Aims To Do

Major projects are essential because they let students apply theoretical knowledge to real-world problems, develop critical skills like problem-solving and teamwork, gain hands-on experience with tools and technologies, encourage innovation and creativity, prepare students for their careers by demonstrating initiative and independence, and familiarise students with industry standards.

www.kamaldnp.com

Learning Outcomes

After undergoing this subject, the student will be able to:

- Use effectively oral, written and visual communication.
- Demonstrate skill and knowledge of current technological tools and techniques specific to the professional field of study.
- Identify, analyse and solve problems creatively through sustained critical investigation.
- Develop leadership abilities.
- Apply fundamental and disciplinary concepts and methods in ways appropriate to their areas of study.

Why Major Projects Matter

- **Application of knowledge:** applying theoretical concepts to practical, real-world problems, reinforcing understanding.
- **Skill development:** problem-solving, critical thinking, teamwork, and project management — highly valued in the engineering industry.
- **Hands-on experience:** tools, materials, and technologies used in mechanical engineering.
- **Innovation and creativity:** thinking creatively and coming up with innovative solutions to engineering challenges.
- **Career preparation:** demonstrating initiative, independent work, and completed tasks to potential employers.
- **Industry standards:** familiarity with industry standards and practices, preparing for professional work environments.
- **Networking:** building networks with peers, faculty, and industry professionals.

As a major project activity, each student studies the operations at site and prepares a detailed project report of the observations, processes and activities. Each teacher may guide a group of 4 to 5 students.

How Project Is Marked (240 Internal Marks)

Criteria	Marks
Attendance and punctuality	40
Project progress Presentation-I	50
Project progress Presentation-II	50
Project model & final presentation	90

www.kamaldnp.com

Report writing	60
Total (internal)	**240**

The teachers, along with field supervisors/engineers, conduct the performance assessment of students. The external practical examination carries 160 marks (3 hours).

The 6th Semester — Two Pathways

The 6th semester has two pathways, and the Project belongs to the **Normal Pathway (A)**: Project (400 marks, 12 credits) + Entrepreneurship and Start-ups (100 marks, 2 credits, theory) + one Elective Pathway subject (100 marks, 3 credits: Advanced Engineering Mathematics, Additive Manufacturing, Project Management, Finance Fundamentals, or Industry 4.0) + one Elective Specialization subject (100 marks, 3 credits: Green Energy & Engineering, Maintenance of Machine Tools, Non-Destructive Testing, or Product Design & Development) + Student Centred Activities (50 marks). Total: 750 marks, 20 credits.

The alternative is the **Internship Pathway (B)**: Entrepreneurship and Start-ups online (100 marks) + Industry Hands-on Practice (350 marks) + Industrial Project (200 marks) + Seminar in institute (100 marks) = 750 marks. The industrial training tenure must not be less than 4 months, the industry must be registered with MSME / Directorate of Industries / a limited organisation / a State or Central Government establishment, and monthly progress reports must be attested and forwarded by the industrial supervisor. Students on this pathway do not take the Major Project. Choose your pathway with your HOD before the semester begins.

How to Prepare

Your 5th-semester Minor Project is your starting point — do not begin from scratch. Plan the 6th semester around the four marked milestones: Presentation-I (50), Presentation-II (50), the model and final presentation (90, the biggest single item), and the report (60). The model matters most: a working model, presented well, is worth more than any other single item. Keep attendance up (40 marks) and build the report as you go — a report written from a site diary reads very differently from one written in the last week.

Reference Books

Reference books are not listed for this subject in the official syllabus.

KAMALDNP • kamaldnp.com • support@kamaldnp.com
Source: BTEUP IRDT Kanpur NEP-2020 curriculum for Diploma in Mechanical Engineering (Production), effective session 2026-27, approved by the Board of Technical Education U.P. Lucknow in the C.D.C. meeting held on 16.07.2026 (urise.up.gov.in). Topic lists follow the official syllabus; short explanations are the author's own plain-English summaries, not syllabus text. Please confirm with your own polytechnic for any local changes.