

OP Jindal University Raigarh
Department of Civil Engineering

Presents

National Level
Hackathon 2K24

on

Design of a Residential Building
(G+4 Apartment type)

Date: 26th June to 26th July, 2024

Only for
Civil Engineering
Diploma
Students

Registration
Free

Important Dates

Launch/Announcement date	: 26 June, 2024
Registration start date	: 26 June, 2024
Last date of registration	: 07 July, 2024
Date of first stage of submission	: 17 July, 2024
Declaration of short listed candidate	: 22 July, 2024
Presentation of selected teams	: 25 July, 2024
Declaration of Results	: 26 July, 2024

Prizes

First Prize:

3000/-

Second Prize:

2000/-

Third Prize:

1000/-

Consolation

500/-
(each of 03 nos.)



About the Problem

Problem Statement:

Design a Residential Building (Apartment type G+4)

Objective:

Design a residential apartment building with the following specifications:

- Ground Floor: Dedicated to parking.
- Four Floors Above Ground (G+4): Consisting of residential flats/ quarters.
- Total Flats/Quarters: Thirty-two flats.
- Sixteen 3-BHK flats/quarters.
- Sixteen 2-BHK flats/quarters.
- Additional parking facility (carport type) with solar roof for 20 cars.

Detailed Requirements:

Site Plan and Layout:

- Develop a site plan showing the building footprint, access roads, and parking layout.
- Ensure efficient use of space for both residential and parking areas.

Ground Floor Design:

- Design the ground floor to accommodate sufficient parking for residents.
- Consider provisions for bike parking and visitor parking.
- Include spaces for services like electrical rooms, water pump rooms, and waste collection points.



For Registration
Scan this QR

Registration

<https://forms.gle/C28yvSdAG1CPnMcKA>

Contact Details

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Residential Floors (First to Fourth Floor):

- Each floor should have a mix of 3-BHK and 2-BHK flats.
- Design the flats to ensure optimal use of space, natural light, and ventilation.
- Consider privacy, noise control, and access to common areas.

Others (Safety and Sustainability):

- Design emergency exits, fire escapes, and other safety features.
- Incorporate accessibility features for differently-abled individuals.
- Integrate sustainable design practices such as rainwater harvesting, solar panels, etc.
- Provide details on the outdoor lighting facility, security office/ chamber and other necessary items.

Files to be submitted (in PDF):

- Floor plans for each level, including the ground floor.
- Elevations and sections of the building.
- Detailed drawings of each flat type (2-BHK and 3-BHK).
- Structural layout for each floor.
- Preliminary cost estimate for the construction of the building.
- A comprehensive report explaining the design approach, materials used, and compliance with standards. Include calculations, assumptions, and justifications for design choices.

Evaluation Criteria:

Documentation (300):

- Originality and creativity in the design (50)
- Accuracy and detail in architectural and structural drawings (50)
- Efficient use of space and resources in the apartment (50)
- Practicality of the design for residents (50)
- Effective use land area for parking, lawn and other activities (50)
- Usage of smart materials and adherence to codes/standards (50)

Presentation (100)

- Clarity and completeness of drawings and models (50)
- Quality and comprehensiveness of the project report (50)

General Rules and Terms of Participation:

- Participants can register their name through this link- <https://forms.gle/C28yvSdAG1CPnMcKA>.
- Ten days will be given to the participants to submit their drawings.
- Student can submit their drawing in the form of AutoCAD drawing or hand drafted drawing sheet on email ID.
- Award will be given to first three winning entries.
- Decision of jury will be final and binding.
- All participants will be rewarded with certificate of participation.

About OP Jindal University

Founded by the Jindal Education and Welfare Society, OP Jindal University (OPJU) was set up to bring high quality education to its students based on a world class curriculum, the latest teaching methodology and committed faculty members. The multidisciplinary university aims to develop young professionals and future leaders who will not only power growth and development in the state, but also make a mark globally.

At the core of the university's philosophy and approach lies the belief that students learn best when exposed to real world situations and when nurtured through enriching interactions with practitioners and professors. We at OPJU believe that every student has innate potential that can be unlocked through quality teaching and mentorship.

About Department of Civil Engineering

The Department of Civil Engineering is one of the primary engineering departments of OP Jindal University. Apart from the B. Tech degree program, the Department of Civil Engineering offers a master's program in structural engineering and high-quality research opportunities at Ph. D. level. To ensure that students are sought by the construction industry, the department provides training in various cutting-edge technologies to inculcate professional behaviors, instill ethical values and develop leadership and team working capabilities. Our program offers training in advanced civil engineering design software like STAAD Pro., AutoCAD, MSP Projects, Primavera, SketchUP, Revit BIM etc., currently used in the job market.

The department actively promotes curriculum development by updating existing courses, developing new courses and preparing resource material for teaching. It undertakes industrial consultancy works as a part of its interaction with industry and also organizes seminars/symposia & guest lectures by inviting experts from various industries & academia for professional interactions.

Department Highlights

Well-qualified and dedicated faculty & staff inclined toward teaching, programming and research activities.

State of the art laboratories with advanced equipment.

Continuous interaction with industry experts to provide exposure to students.

Departmental library to assist students and faculty members.

Continuous evolution systems through online tests, quizzes, and assignments.

Inquisitive experimentation in laboratories.

Different association & professional chapters for all round development of students.

Licensed versions of STAAD Pro., AutoCAD, MSP Projects, Primavera, SketchUP, Revit software.*

General Rules and Terms of Participation

Teams of up to
THREE (03)
members.

**Recommended to
have a faculty mentor
for guidance**

