**SUMMER INTERNSHIP POWERED BY BOSCH REXROTH**

**ON**

# INDUSTRY ORIENTED BASIC HYDRAULICS AND SYSTEM APPLICATIONS

**Organized by Swami Vivekananda University, Kolkata**

**11th June to 11th July & 12th June to 11th July, 2026**

**(Four Week)**

**Program Schedule**

| Date | First Half<br>11.00 AM to 1.00 PM | Second Half<br>2.30 AM to 5.00 PM |
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| 11-06-2026<br>12-06-2026 | – | Inauguration, Lab Visit, Significance of the Internship Training Program, Industry-Oriented Discussion, and Job Opportunities |
| 13-06-2026<br>15-06-2026 | Introduction to Basic Hydraulics: Basic physics and principles of hydraulics, Pascal's law and fluid dynamics, Continuity Equation, Bernoulli's Principle | Standard hydraulic symbols and schematic interpretation, Different hydraulic instruments: Hydraulic Pumps, Hydraulic Motors and Cylinders, Hydraulic Valves, Hydraulic Accumulators |
| 16-06-2026<br>17-06-2026 | Hydraulic fluids, types, and additives, Contamination control and filtration methods, Hydraulic system troubleshooting techniques, Preventive maintenance strategies for hydraulic systems, Safety protocols and risk assessment in hydraulic operations | Practical Demonstration of Hydraulic Instruments |
| 18-06-2026<br>19-06-2026 | Open-Loop Hydraulic Systems: Principles of open-loop hydraulic circuit design, Selection criteria for hydraulic components, Flow and pressure control techniques in open-loop systems, Types of common controllers, their functions, and applications, Discussion on Project 1 | Hands-on Experiment on Project 1 by each group |
| 20-06-2026<br>22-06-2026 | Discussion on Project 2 | Hands-on Experiment on Project 2 by each group |
| 23-06-2026<br>25-06-2026 | Discussion on Project 3 | Hands-on Experiment on Project 3 by each group |

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| 26-06-2026<br>28-06-2026 | Discussion on Project 4 | Hands-on Experiment on Project 4 by each group |
| 29-06-2026<br>30-06-2026 | Discussion on Project 5 | Hands-on Experiment on Project 5 by each group |
| 1-07-2026<br>2-07-2026 | Electronics Fundamentals for Hydraulic Systems: Basic principles of electronics and fluid power analogies, Electrical symbols and circuit diagram interpretation, working of relays and solenoids in hydraulic systems, Functions and types of electronic components, Basic troubleshooting of hydraulic-electronic circuits, Discussion on Project 6 (Electronics Related) | Hands-on Experiment on Project 6 by each group |
| 3-07-2026<br><br>4-07-2026 | Discussion on Project 7 | Hands-on Experiment on Project 7 by each group |
| 5-07-2026<br><br>6-07-2026 | Discussion on Project 8 | Hands-on Experiment on Project 8 by each group |
| 8-07-2026<br><br>9-07-2026 | Discussion on Project 9 | Hands-on Experiment on Project 9 by each group |
| 10-07-2026 | Measurement & Analysis in Hydraulic Systems: Principles and techniques of pressure measurement, Methods and instruments for flow measurement, Discussion on Project 10 | Hands-on Experiment on Project 10 by each group |
| 10-07-2026 | Discussion on Project 11 | Hands-on Experiment on Project 11 by each group |
| 11-07-2026 | Doubt Clearing, Question and Answer Session | Feedback Collection, Certificate Distribution, End of the Program |

*Distribution of Training Kits will be started from 2 PM on 11-07-2026.