

SAHI RASA × ANGK

University Laboratory Development & Turnkey Solutions

Sahi Rasa

**pioneer in equipping
educational laboratories and
universities**

Online: +989220673851

prices@sahirasa.com

From Concept to a Fully Operational Laboratory

Sahi Rasa, in collaboration with **ANGK**, provides end-to-end solutions for the design, development, manufacturing, supply, installation, and operation of university, educational, research, and industrial laboratories.

From initial needs assessment and laboratory design to **custom equipment manufacturing, specialized equipment procurement, installation, commissioning, training, and technology transfer**, we provide a complete and integrated laboratory solution under one project framework.

What We Do

Complete Laboratory Solutions

We do not simply supply laboratory equipment. We develop complete laboratory environments based on the university's academic programs, research objectives, available space, student capacity, and technical requirements.

Needs Assessment → Design → Custom Manufacturing → Equipment Supply → Installation → Training → Commissioning → Operation

01. Laboratory Needs Assessment

Understanding Your Requirements

We begin by identifying the educational, research, and operational requirements of the laboratory.

Our assessment considers:

- Academic disciplines and curricula
 - Number of students and users
 - Laboratory capacity
 - Available space
 - Research requirements
 - Required level of automation
 - Safety and infrastructure requirements
 - Equipment and technology requirements
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02. Laboratory Design & Engineering

From Space to System

Our engineering team develops the technical concept and layout of the laboratory, ensuring that equipment, infrastructure, utilities, safety systems, and workflows are properly integrated.

Our services include:

- Laboratory Layout Design
 - Equipment Planning
 - Technical Specification
 - Equipment Positioning
 - Electrical Infrastructure Planning
 - Network & Communication Planning
 - Utility Requirements
 - Safety Planning
 - Workflow Design
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03. Custom Design & Manufacturing

Engineering Equipment Around Your Needs

One of our key capabilities is the **custom design and manufacturing of educational, research, and industrial laboratory equipment.**

When standard equipment does not meet the project's requirements, ANGK's engineering capabilities enable us to develop customized solutions based on the required specifications, application, and budget.

Custom Solutions Include:

- Educational Robotic Arms
- Industrial Robotic Systems
- Mechatronics Trainers
- Automation Training Systems
- PLC Training Systems
- Motion Control Systems
- Machine Vision Systems
- Industrial Training Cells
- Custom Mechanical Systems
- Embedded Systems
- Electronic Training Systems

- Research & Prototyping Equipment
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04. Equipment Procurement & Supply

Complete Laboratory Equipment Supply

Sahi Rasa manages the sourcing and supply of specialized laboratory equipment through qualified manufacturers and technology partners.

Depending on the project, equipment can be sourced for:

- Mechanical Engineering
 - Electrical & Electronics
 - Robotics & Mechatronics
 - Civil Engineering
 - Chemical Engineering
 - Materials Engineering
 - Environmental Engineering
 - Computer Engineering
 - Artificial Intelligence
 - Automation & Industry 4.0
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05. Installation & System Integration

Bringing Every System Together

Equipment is installed and integrated according to the approved laboratory design.

Installation & Integration Services:

- Mechanical Installation
- Electrical Installation
- Equipment Assembly
- Control System Integration
- PLC & HMI Configuration
- Software Installation
- Network Configuration
- Robotics Integration
- System Testing
- Commissioning

Our objective is to deliver a fully integrated laboratory in which individual equipment and systems operate together as a unified environment.

06. Training & Technology Transfer

Turning Equipment into Knowledge

A laboratory becomes truly valuable when its users can operate and utilize the equipment effectively.

Sahi Rasa and ANGK provide training programs for **professors, laboratory technicians, engineers, and students**, covering both equipment operation and practical applications.

Training Programs Include:

- Equipment Operation
 - Laboratory Safety
 - Robotics Programming
 - PLC Programming
 - Industrial Automation
 - Machine Vision
 - Motion Control
 - Industrial Control
 - Equipment Maintenance
 - Troubleshooting
 - Research Applications
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07. Commissioning & Operational Support

From Installation to Independent Operation

Following installation, each system is tested and prepared for operational use.

Our commissioning process may include:

Testing → Calibration → Commissioning → Training → Documentation → Handover

We can also provide ongoing technical support, maintenance, spare parts, system upgrades, and laboratory development services.

Laboratory Solutions

Laboratories We Design, Manufacture & Equip

Mechanical Engineering

- Strength of Materials Laboratory
- Fluid Mechanics Laboratory
- Thermodynamics Laboratory
- Heat Transfer Laboratory
- Manufacturing Laboratory
- CNC & Machining Laboratory
- CAD/CAM Laboratory
- Metrology Laboratory
- Machine Design Laboratory
- Additive Manufacturing Laboratory

Robotics & Mechatronics

- Educational Robotics Laboratory
- Industrial Robotics Laboratory
- Robotic Arms Laboratory
- Collaborative Robotics Laboratory
- Mobile Robotics Laboratory
- Machine Vision Laboratory
- PLC & Automation Laboratory
- Motion Control Laboratory
- ROS & Robot Programming Laboratory
- Drone & UAV Laboratory
- Industry 4.0 Laboratory
- Smart Factory Laboratory
- Digital Twin Laboratory

Electrical & Electronics

- Electrical Circuits Laboratory
- Electronics Laboratory
- Digital Electronics Laboratory
- Microcontrollers Laboratory
- Embedded Systems Laboratory
- Power Electronics Laboratory
- Electrical Machines Laboratory
- Power Systems Laboratory
- High Voltage Laboratory

- Control Systems Laboratory
- Instrumentation Laboratory
- Telecommunications Laboratory
- Renewable Energy Laboratory
- Smart Grid Laboratory
- Electric Vehicle Laboratory

Civil Engineering

- Concrete Technology Laboratory
- Construction Materials Laboratory
- Soil Mechanics Laboratory
- Geotechnical Engineering Laboratory
- Structural Engineering Laboratory
- Earthquake Engineering Laboratory
- Hydraulics Laboratory
- Transportation Engineering Laboratory
- Surveying & Geomatics Laboratory
- Environmental Engineering Laboratory

Chemical, Materials & Environmental Engineering

- Chemical Engineering Laboratory
- Unit Operations Laboratory
- Reaction Engineering Laboratory
- Process Control Laboratory
- Analytical Chemistry Laboratory
- Polymer Laboratory
- Nanotechnology Laboratory
- Materials Characterization Laboratory
- Metallography Laboratory
- Corrosion Laboratory
- Water Quality Laboratory
- Wastewater Treatment Laboratory
- Environmental Monitoring Laboratory

Computer Science & Emerging Technologies

- Artificial Intelligence Laboratory
- Machine Learning Laboratory
- Computer Vision Laboratory
- Internet of Things (IoT) Laboratory
- Industrial IoT Laboratory
- Cybersecurity Laboratory
- Computer Networks Laboratory
- Data Science Laboratory

- Cloud Computing Laboratory
 - VR/AR Laboratory
 - Embedded Systems Laboratory
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Why Sahi Rasa × ANGK?

One Partnership. One Complete Solution.

The collaboration between **Sahi Rasa** and **ANGK** combines project management, engineering, manufacturing, procurement, technology integration, and training capabilities into a single laboratory development solution.

Custom Manufacturing

Development and production of equipment tailored to project requirements.

Engineering & Design

Technical design and engineering of complete laboratory systems.

Equipment Procurement

Sourcing and supply of specialized educational, research, and industrial equipment.

System Integration

Integration of mechanical, electrical, electronic, robotic, and software systems.

Installation & Commissioning

Professional installation, testing, calibration, and commissioning.

Training & Technology Transfer

Practical training and transfer of technical knowledge to university personnel and students.

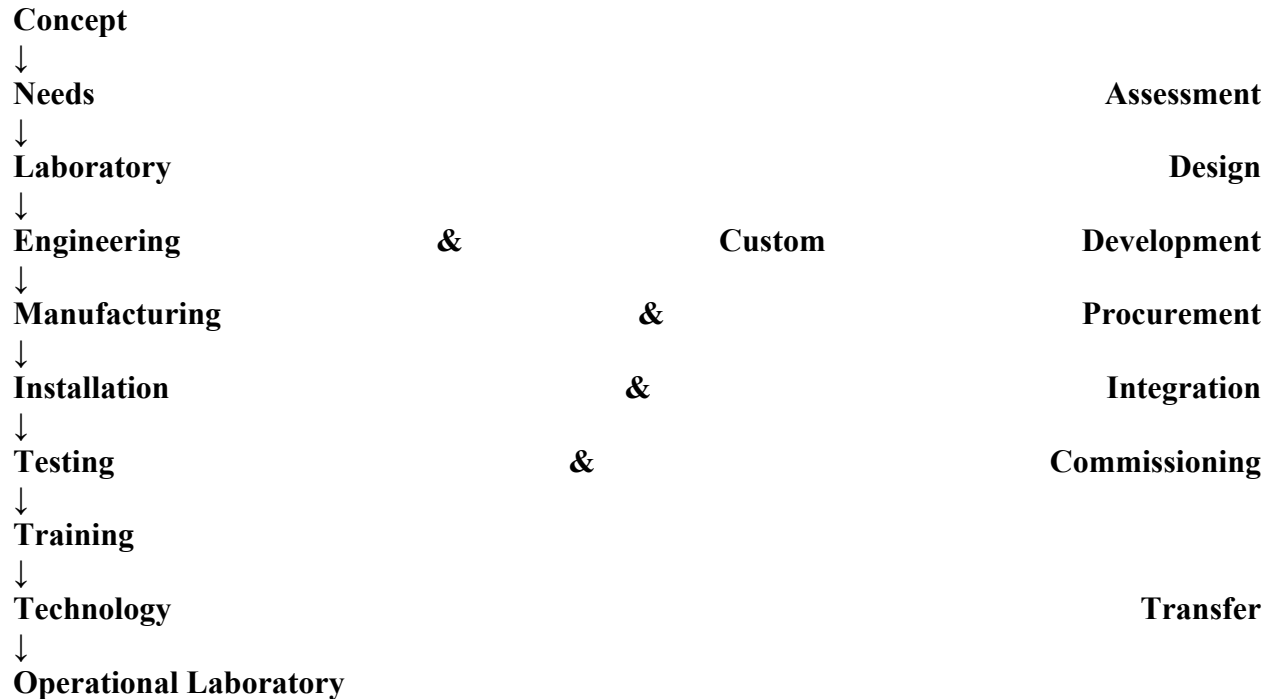
Operational Support

Technical support, maintenance, spare parts, upgrades, and continuous development.

From an Empty Room to a Complete Laboratory

We develop laboratories as **integrated systems**, not simply as collections of equipment.

Our Turnkey Laboratory Process



SAHI RASA × ANGK

Building the Laboratories of Tomorrow

Design. Manufacture. Equip. Train. Operate.

www.sahirasa.com

A complete partner for universities seeking to develop modern laboratories in **Engineering, Robotics, Automation, Manufacturing, Artificial Intelligence, Industry 4.0, and Emerging Technologies.**



Sahi Rasa Trade Eng. Co., Ltd

15th Floor, Kian Tower, Jordan Qtr., Tehran, Iran

Online: +989220673851

Iraq: +9647517977807

Iran: +982141406268

www.sahirasa.com

ask@sahirasa.com