

Consultant / Technical expert

Home Automation technician training content (focusing on Energy Efficiency)

Lebanon

CONTEXT

The European Institute for Cooperation and Development (IECD) is a French non-governmental organization (NGO) founded in 1988 and operating in the field of social and economic development in partnership with local institutions. IECD's main sectors of action are vocational training and professional integration, assistance to micro and small enterprises, and access to education for the most vulnerable. IECD has been operating in Lebanon since 1989 and opened a regional office in Beirut in 2007.

Semeurs d'Avenir (SDA), association created in 2010, is the operational partner of IECD. As part of its partnership with IECD, SDA implements projects in the field of entrepreneurship, education, training, and professional integration.

As part of the energy efficiency project, IECD and SDA are soliciting proposals from qualified technical experts to support the drafting of curricula relevant to training for Home Automation technicians focusing on energy efficiency.

SCOPE OF WORK FOR THE CONSULTANT

This training aims to assist technicians in acquiring the necessary skills in the Home Automation sector. Here are the key skills required from a Home Automation technician:

Technical Knowledge:

Understanding the basics, the significance, the architecture, and various applications of home automation systems including:

- Knowledge of electrical systems, wiring, electronic components, home automation Smart devices (sensors, relays, actuators, microcontrollers, Bluetooth module, control home device/appliance Android phone for example, ...), ...
- Knowledge of Networking and Communication Protocols (Wired and wireless communication protocols (e.g., DALI, RF, Wi-Fi, Bluetooth, KNX (EIB), ...), IP networking basics, Powerline communication (PLC)), IoT technology, voice control and AI integration, ...
- ...

Home architecture system design: Reading a home automation system architecture.

Installation: Proper handling and installation of home automation smart devices, with the necessary electrical wiring and network connections, following the manufacturer specifications and industry standards as per the construction and electrical drawings.

Programming and Software Skills: Developing the ability to control any home device and security systems by writing user-friendly code using the most used automation software in Lebanon.

Testing and Commissioning: Start-up and testing, regulations.

Preventive, Corrective, and Ameliorative Maintenance: Conducting maintenance for Home Automation systems to ensure optimal performance and efficiency. Ability to diagnose and resolve issues with home automation systems efficiently. This includes identifying hardware and software problems, testing components, and finding solutions.

Energy Efficiency and Environmental Considerations: Implementing smart energy management systems to reduce energy consumption and overseeing the site's environmental management and waste production.

Adherence to Workplace and Electrical Safety Protocols: Complying with safety regulations to prevent accidents and ensure a secure working environment.

Communication Skills: Clear and effective communication skills to explain technical concepts to clients, colleagues, and supervisors, including effective client communication, documentation, and reporting.

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The selected consultant will continuously coordinate with the training development manager to develop the Home Automation training curricula, content, and exercises. This development will adhere to the Competency-Based Approach and target students aged 18 and above with a technical baccalaureate or an equivalent educational background, aligning with the previously mentioned required skills.

The consultant will also have access to a Lebanese market assessment in the energy efficiency field that can guide the creation of the curricula.

DELIVERABLES

The consultant will deliver the necessary information for the curriculum creation in a soft copy as follows (**ENGLISH** language is the priority, and French can be discussed):

- 1- Curriculum design: Design and structure training programs that align with the skill progression of technicians, ensuring a thorough understanding of Home Automation technologies (the estimated training duration is up to 200 hours). This includes:
 - List of professional activities.
 - List of competencies to be acquired by a technician.
 - List of modules (courses).
 - Timeline table (content and number of hours dedicated for each module).
 - Examination regulations (assessment method).
 - List of Home Automation Smart devices and tools to be used for the practical part.
 - Pre-test to assess the proficiency level of students who will enroll in this training.
- 2- Content Development:
 - Engaging and informative content (theoretical part including power point presentations, manuals, ...).
 - Practical exercises with their correction (practical part).
 - Written and practical exams with their corrections.
- 3- Training of Trainers: Additionally, the consultant will participate in the Training of Trainers (TOT) by preparing the technical part (related to Home Automation sector) after the completion of the curriculum, being present during the TOT and assisting IECD team in the evaluation of potential trainers.

All the deliverables should follow the IECD methodology and available templates, while reporting to the training development manager at IECD.

The consultant shall submit all deliverables within **four months after signing the contract.**

PROFILE

Education

- University graduate with an advanced degree in electrical engineering or technical degree in the relevant field.

Experience

- At least 3 years of professional experience in the Home Automation sector.
- Experience in developing courses, curricula, and educational resources in the technical field.
- Experience with the competency-based approach.
- Experience in technical training.

Recommended skills and competencies:

- Fluency in Arabic and English is required. French is a plus.
- Oral and written communication skills.
- Organizational skills.
- Computer skills: Microsoft Word, Microsoft Excel, and PowerPoint.
- Autonomy, responsiveness, and flexibility.
- Ethical and professional integrity.

HOW TO APPLY

Technical proposal:

Interested individuals are invited to submit their proposal in English based on the TOR, the proposal should include:

- Technical description outlining the deliverables according to the Scope of Work and Deliverables sections (see pages 1 & 2), considered as a preliminary brief design of the consultant services (maximum 3 pages).
- CV/Portfolio including experience with similar projects in the past.
- Any document to gain a comprehensive understanding of the candidate's qualifications, experience, and ability to contribute to the development of Home Automation training content: certifications, technical writing samples, training experience, references, ...

Financial proposal:

- A comprehensive financial offer based on deliverables, presented in a table format. The financial proposal should cover all fees and expenditures, including payment methods and all necessary information for payments.

PAYMENT TERMS

Payment schedule will be defined at the contract stage based on mutual agreement between consultant and IECD.

Payment shall be issued within 15 working days upon the submission of the invoice.

In case the consultant is not registered with the Ministry of Finance, a deduction of 8.5 % should always be considered.

The consultant has to select one of the below payment modalities and to mention it in the RFP:

- **Payment through bank transfer to Bank Audi account**, if the consultant has a Bank Audi account. This modality imposes zero transfer charges.
- **Payment through Bank transfer to bank other than Audi** if the consultant doesn't have an Audi Account. The consultant must bear the charges fees.
- **Payment through OMT:** Consultant to bear the fees imposed by OMT. **The fee is 2.3% of the total amount of the invoice.**

EVALUATION CRITERIA

A technical evaluation will be conducted to all the bidders based on the above-mentioned technical proposals submitted.

The weighted evaluation will be done as follows:

- Technical proposal grade: 70% of the total evaluation
- Financial proposal grade: 30% of the total evaluation

As for the technical qualifications they will be evaluated based on the following criteria:

Qualifications	Scale	Disqualified
Technical description (preliminary brief design)	50%	Below 40%
Professional Experience and previous work in the relevant field	25%	Below 20%
Experience in writing curricula	25%	Below 20%
Total	100%	Below 80 %

OTHER INFORMATION

The Technical Consultant undertakes to provide his service, in close coordination with the project team.

Job Location: remote work with visits to IECD Beirut Office when needed.

Contract Type: Consultancy.

Starting date: As soon as possible.

Deadline: 15 July 2024.