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Electronic Access Control system

1.1 GENERAL REQUIREMENTS

- A. Supply, installation, testing, training, integration, and commissioning of a new Electronic Access Control System (EACS) are needed from the Contractor side.
- B. All EACS wiring shall be contained within conduit.
- C. All EACS components should be able to operate within temperature range of -10 to 55 degrees C and humidity range 0 to 100% unless noted otherwise.
- D. Intelligent Access Control Panels (ACPs) shall provide a centralized access control and alarm monitoring architecture.
- E. Secure Ethernet (TCP/IP) connection is required for ACPs, and EACS system components.
- F. The Contractor shall provide all the required software and hardware for this functionality.
- G. The Contractor shall integrate the EACS with the current university ERP system.
- H. Any needed licenses or software for the Electronic Access Control system should be included and specified in the offer.
- I. The power points, accessories (wires, cables, conduits), data points, and their related civil work are needed from the Main contractor. All parts should be confirmed and agreed by the Engineering and General Services Department and with Information Technology & Communication Center in the university before their usage in the project.
- J. The contractor will deliver a turn key solution without any extra fees from the university.
- K. The contractor will provide 3 year warranty for all parts (HW or SW).



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- L. In case a virtual machine or server is needed then the university will secure it for the contactor.
- M. Warranty for three years is required.
- N. All civil works shall be provided by the Main Contractor; the civil works should be specified in details and in collaboration with the Engineering and General Services Department and with Information Technology & Communication Center, the civil works should satisfy the quality and the aesthetic features of the university.
- O. All used wires, accessories should be specified in details and in collaboration and approval by the Engineering and General Services Department and with Information Technology & Communication Center.
- P. The contractor shall ensure that the system stores and retrieve all access data of students, employees, faculty members, and visitors (data retrieval upon card taping or by customized reports) and links it to the university's databases within the university's ERP system.

1.2 ELECTRONIC ACCESS CONTROL SYSTEM REQUIREMENTS

- A. Access System controller must be integrated with university database directly.
- B. The System shall provide a second relay module for controlling gate direction that can be scheduled in certain cases.
- C. The system shall be able to do complete system card disabling upon triple tap for cards or using push button
Or through the system software or any other method.
- D. The system shall provide visitor management to enable entry upon count, date, time, identity card scan, or all of them.
- E. Guard tour functionality to check duty for guards is preferable but not mandatory.



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- Date:** F. The system shall be modular expanded through modules.
G. Programmable temporary and permanent access groups.
H. Authentication and authorization for Groups using group ID's.
I. The system shall support, or be expandable to support at least the following:
1. 20,000 card/user capacity.
 2. programmable holidays
 3. Programmable temporary cards
 4. Time and Attendance features and reporting for employees, students, and for Vehicles.

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1.3 ACCESS CONTROL READERS REQUIREMENTS

Smart Card Reader (both long range and short range are required)

- a. Access Control Readers shall support smart card contactless technology.
- b. Access control readers shall derive their power from the ACP or door controller.
- c. Accidental or intentional transmission of radio frequency signals into the reader shall not compromise the system
- d. Outdoor card readers shall be weather-proof to a minimum of IP65 and vandal-proof.
- e. Typical reader specification:
 - 1). Protection: IP65
 - 2). Detection Range: 5cm for short-range readers and 5 meters for long-range readers.
 - 3). Tamper switch



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1.4 FULL HIIEHT TURNSTILES

- a. The turnstile shall be minimum requirements for parts (moving parts stainless steel and fixed parts hot dip galvanized)
- b. Electrical, data lines, cabling, integration to EACS, and civil works for the Turnstile gates shall be provided by the Main Contractor.
- e. Turnstile gates shall be manually operated bi-directional system (optional motorized) with dipswitch selectable operational modes including controlled access on both sides, one side free (exit or entry) and other side controlled access and access restriction modes.
- d. Turnstile gates shall be support the rotor spins freely to allow free passage (fail safe default). Fail lock option is available (Emergency Mode)
- f. The flow rate shall be for the Turnstile must be specified in the offer.
- g. Turnstile gates size should be specified in the offer.

1.5 BARRIER GATES

- a. The main contractor must supply and install barriers with all accessories, indicating their detailed technical specifications to ensure their quality
- b. Electrical, data lines, cabling, integration to EACS, and civil works for the Turnstile gates shall be provided by the Main Contractor.
- d. As required barrier systems shall be possible to be controlled via the access control system and shall communicate its status (open, closed, fault, locked open, locked closed, automatic) to the access control system.
- e. The barrier arm must be capable of being manually moved in the event of a power failure without the need for keys, tools or crank handles. Upon



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restoration of power the gate arm must automatically rest in the down position.

1.6 WALKTHROUGH METAL DETECTOR

- a. The metal detector shall contain Standard Programs and programmable programs; the maximum number for standard and programmable programs should be specified. .
- b. The metal detector shall support distinct sensitivity levels and the maximum number for them should be specified in the offer.
- c. The metal detector shall support independent zones; the supported number of zones should be specified in the offer.
- d. The metal detector shall be Overhead Control Unit All electronics— LCD, alarm light, LED bar graph, control touch pads— integrated to eliminate wire exposure

1.7 SMART CARDS

- a. Smart cards should be detected by the long-range reader or short-range reader or both readers.

1.8 LCD display screens

- a. LCD display screens with suitable size (based on the location) to display the information for the students; employees, and cars for security staff in the university.
- b. protective measures for the screens from the weather conditions is required.



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Table 1: Quantities for the required Electronic Access Control system

No.	Item	Quantity
1.	Barrier Gate system	1
2.	SMART CARD Readers	5
3.	Smart cards	6000
4.	FULL HIIIEHT TURNSTILES	3
5.	Walkthrough Metal Detector system	1
6.	LCD display screen	3