

THE COLLEGE OF ENGINEERING RISK MANAGEMENT PLAN

Vice Deanship of the College of Engineering for Development and Quality



Muharram 1442 A.H. - August 2020 A.D.

**SAFETY
FIRST!**



Emergency Contacts



Civil Defense Inside KSU Campus	955 or 0114673221
Civil Defense Outside KSU Campus	998
Ambulance of King Khalid Hospital	99999 or 0114699999
General Directorate of KSU Safety & Security	950 or 0114670950
Committee for the Prevention of Chemical and Biological Pollution	0114674360
Committee for the Prevention of Radioactive Pollution	0114676633



College of Engineering

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unit is supervised by college staff members who are nominated by Dean's administrative decision. The unit consists of two main committees:

- Laboratory Supervisors Committee

prevent loss of lives and properties as much as possible.

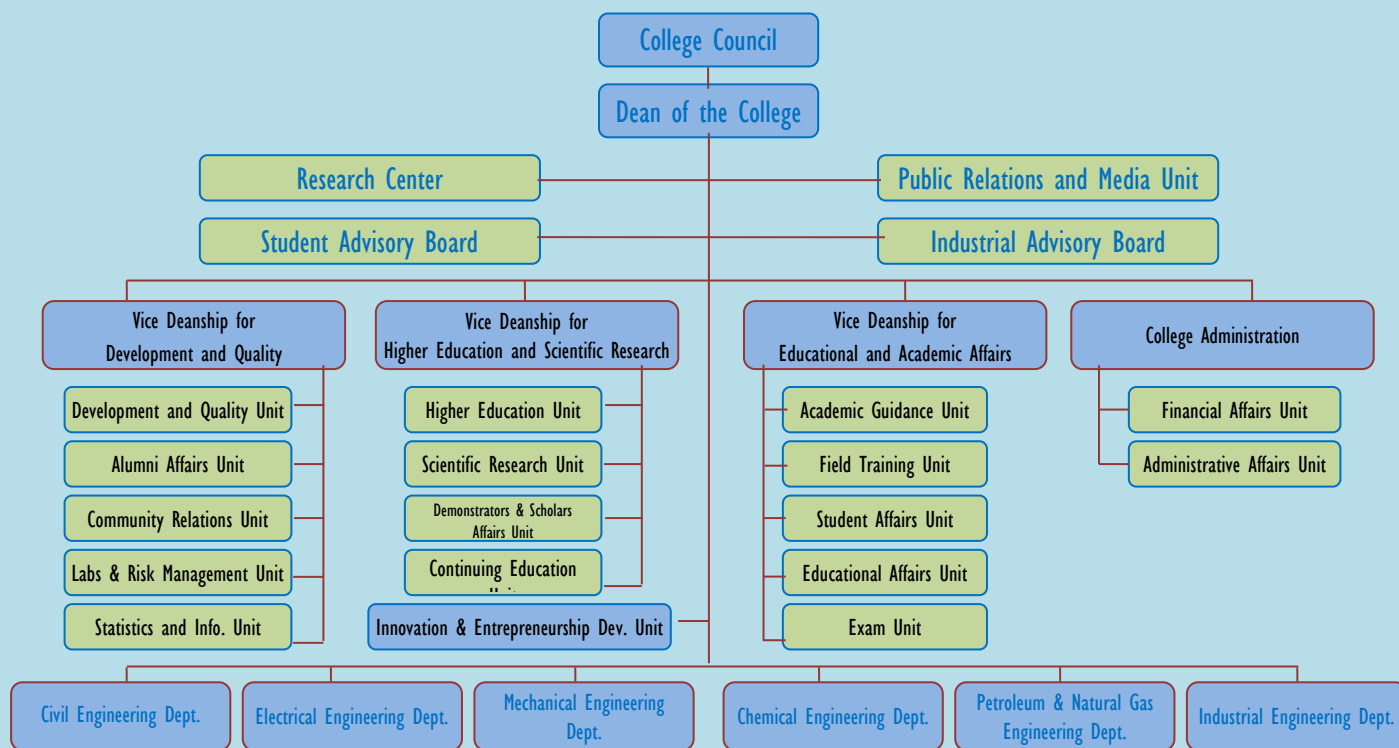


Figure 1: The general organizational chart of the College of Engineering (1439 AH - present)

2- Occupational Safety Committee

The Occupational Safety Committee at the College of Engineering is formed by an administrative decision issued by the Dean of the College. The committee includes representatives from all units, departments, centers and institutes within the college in addition to the head of the KSU risk management as a consultant. It currently includes:

- Dean of the College of Engineering (Supervisor)
- Vice Dean for Development and Quality (Chair)
- Head of the College's Development and Quality Unit (Coordinator)
- Members from all departments of the college
- Director of the college's administration
- A member from the Prince Sultan Institute for Advanced Research
- A member from the Advanced Manufacturing Institute
- A consultant from the KSU risk assessment department
- Secretary of the Committee

The Occupational Safety Committee at the College of Engineering is concerned with assessing the risks of the work, teaching and research environment and their working conditions, studying the causes of occupational accidents and injuries, and taking the necessary measures and precautions to prevent their occurrence and non-recurrence by applying the following:

- Identifying and evaluating potential risks in the College of Engineering building and developing plans to face them.
- Designing, printing and publishing safety maps for the building indicating emergency exits and assembly areas.
- Monitoring the application of occupational safety requirements and instructions in all college sites and in laboratories.
- Following up the availability, adequacy and readiness of fire protection means.
- Periodic inspection of all college facilities to verify the implementation of safety requirements to ensure the prevention of work accidents and occupational injuries.
- Evaluating the risks of the work environment in the college and preparing and providing indicative instructions for safe work methods.
- Coordinating the training of the college employees on how to use fire protection tools and evacuation procedures in case of emergency.
- Coordinating mock evacuation plans in the event of an emergency.
- Preparing reports of various accidents and taking decisions to address their causes.
- Studying the cases of abuse and violations submitted to the committee to take decisions in their regard.

3- Laboratory Supervisors Committee

It is an integrative committee with the Occupational Safety Committee that was established at the beginning of the first semester of this year 1439-1440 AH, after updating the organizational charts of the university units.

The committee is formed by a decision from the Dean (and is reformed as needed). It includes a delegate from each academic department who has extensive knowledge of the activities of the department's laboratories, preferably the supervisor of the department's laboratories.

The following are the most important tasks assigned to the Laboratory Supervisors Committee at the College of Engineering:

- Supervising and coordinating of receiving devices and equipment from the supplying companies, ensuring their compliance with the required specifications, examining them before sending the receiving, installation and operating forms to the Procurement Department through the head of the department, and keeping a copy of the forms.
- Listing the periodic needs of devices, tools and consumable materials at the end of each semester and reporting them to the head of the department.
- Returning out-of-order devices and equipment to the Warehouse Department after the approval of the head of the department.
- Instructing technicians to make laboratories available to students during work hours and as needed and following it up.
- Following up the maintenance and testing of devices periodically.
- Keeping the operating manuals and warranties of devices and equipment.
- Making a usage follow-up register for each device and place it next to them.
- Documenting the equipment, tools and materials borrowed from the laboratories as a beneficiary's responsibility, and reporting a list of them to the head of the department at the end of each semester.
- Activating occupational safety requirements and security and safety instructions in laboratories.

4- The most important activities of the unit during the last period

- Coordination with the departments regarding the safe collection and disposal of chemical waste.
- Preparing a plan to confront crises and emergencies (emergency and evacuation) in building (3) of the College of Engineering.
- Preparing an emergency plan for evacuation, identifying collaborators from all units and departments of the college, creating an emergency telephone directory that contains names, mobile phones and landline numbers for all officials and collaborators in the field of security and safety in the college.
- Training the college employees on how to act in the event of an emergency in the college, through drills to evacuate the entire college building (the first drill was conducted on 3/25/1439 AH).
- Paying regular visits to all facilities to ensure that there are no violations affecting the safety of the college building and its visitors.
- Following up observations received from the University's Security and Safety Department and ensuring their being removed.
- Preparing plates with the numbers of the parties to be contacted in the event of an emergency and installing them in clear places all over the college premises.

- Counting the number of people present in the building and distributing them and locating people with special needs.
- Holding periodic meetings for the Occupational Safety Committee.
- Holding several meetings with members of the Occupational Safety Committee at the College of Engineering and representatives from the KSU's risk department, safety and security department, civil defense department, maintenance department, emergency department at King Khalid University Hospital, Committee of the Prevention of Chemical and Biological Pollution, Committee of the Prevention of Radioactive Pollution, and General Administration of Services and Facilities.
- Holding theoretical and practical workshops in cooperation with the KSU's Risk Management Department and the Safety and Security Department to educate and train all employees and students on how to act during emergencies and how to use fire extinguishers of all kinds.
- Making brochures showing emergency exits and how to act in emergency situations.
- Making panels showing emergency exits and assembly points outside the college in all parts of the college.
- Raising awareness of college employees about occupational safety precautions through banners and flyers, visiting students in lecture rooms, publishing on the college's website, and sending instructive emails to college employees and students.
- Distributing phosphorescent vests for members of the Occupational Safety Committee with their ID cards.
- Providing some initial safety requirements for the college laboratories.
- Participation in implementing the KSU's plan for Covid-19 pandemic.

5- The College of Engineering plan to face Risks, Crises and Emergencies in Building (3) (Emergency and Evacuation Plan)

5.1 Definition of Evacuation

It means removing the people from places at risk safely and quickly via the nearest shortcuts.

2-5 Objectives of the Plan

- It aims to evacuate the building from the college's employees as soon as they hear the emergency alarm, by directing them to the assembly points.
- Forming and training an emergency team and defining the duties and tasks assigned to them to serve as a general framework for the implementation of evacuation plans, firefighting and rescue operations in emergency situations, and as a guide for the protection of university employees and students in coordination with the university departments of civil defense and safety.
- Educating and training the college employees about the importance and methods of evacuation.
- Monitoring the plan's deficiencies and addressing them.

5-3 Location and Area of the College of Engineering

- The college is located in the eastern side of King Saud University (KSU) on the pathway of the scientific colleges between Building 2 (College of Agriculture) to the north and Building 4 (College of Science) to the south.
- The College of Science consists of one building with three floors. This building is divided into nine departments.
- The building contains administrative offices, lecture rooms, chemical laboratories, workshops, as well as service rooms such as electric rooms, mechanical rooms and a communication room.
- The location of the nearest civil defense division is the Civil Defense Unit at King Saud University.
- Statistics of the building occupants according to Table 1:

Table No. 1: Statistics of the building's occupants

Job title	Number (healthy - special needs)
faculty members	Approximately
Administrative personnel	Approximately
number of students	Approximately
workers	Approximately

- The nearest ambulance squad is at the King Khalid University Hospital.

- There are two assembly points, one in the back of the building towards the car parks, and the other is in the front of the building. The assembly area is located at the back of the building towards the car parks.

5-4 Emergency Escape Routes

- Two main gates distributed as follows: one at the western side overlooking the pathway of the scientific colleges opposite to building (29) of Deanship of Admission and Registration; the other is at the eastern side overlooking the car parks from the first floor.
- There are six main staircases in the building overlooking the main lobby.
- Eight emergency exits (four along the northern side and four along the southern side of the building).
- Six emergency staircases (three along the northern side and three along the southern side of the building).

5-5 Elements of the Evacuation Plan

The requirements for the success of the crisis and emergency response plan depends mainly on how to detect the warning signals of the crisis, taking preventive measures, and the actual confrontation and containing the damage. It also depends on the available means and equipment and the instruction manual that regulates the method and implementation of the plan which can be classified into:

5-6 Evacuation Methods

The method of evacuation depends on the type of accident. It may be partial or complete evacuation.

- ***Partial Evacuation*** (temporary evacuation) means that those in the building are able to escape from any point of the damaged part of the building and reaching a safe place from fire, often this part is in the same building.
- ***Full evacuation*** means exiting all people from the building to the assembly points outside the building.

5-7 Responsibilities and Duties of the Team's Directors

- Determining the emergency team and being keen on training and developing them, considering making them ready and available at all times, especially at peak times, by providing and announcing a contact line service for emergencies.
- Calling the University Safety and Security Department on 4650950 (Direct 950).
- Ensuring the communication with the competent authorities (Civil Defense, Operations Room at the University Safety and Security Department and Ambulance).
- Ensuring that all employees in the building are fully aware of the escape routes and have the ability to use them.
- Ensuring that all emergency exits are open and the corridors leading to them are unimpeded, that the emergency exits are not closed completely during official working hours and when the faculty employees are in the building, and that they are easy to open to the outside (the direction of the rush at the time of escape).
- Ensuring that all escape routes are clear of obstacles, and they are completely visible to those in the building using fixed indicative signs distributed properly throughout the building.
- Keeping regular maintenance records for automatic alarms and fire extinguishing devices.
- The official spokesman is in front of the officials.
- Supervising the implementation of the evacuation plan.

5-8 Duties of the Heads of Departments in the College Building

- To be knowledgeable about the number of the department's employees (faculty members, employees, students, workers) and if anyone of them is still inside the site.
- Assigning attendance register keepers periodically, alerting faculty members to take attendance sheets with them in emergency cases, and ensuring that the hall is free of students as they take the right way out.
- Ensuring, on a regular basis, that the doors and windows are closed, except for the exits designated for evacuation, and that they have no obstacles.
- Ensuring that the electricity is switched off.
- Ensuring the communication with the competent authorities (Civil Defense, Department of Safety and Security at the site, Operations Room of the University Safety and Security Department in Dir'iya).
- Ensuring the arrival of the competent teams.
- Guiding people to the assembly point ensuring that no one is left behind.

5-9 Duties of the Employees, Students and Workers in Emergencies

- Try to be calm and not confused.
- Stopping work immediately.
- Acting upon the advice and directions of the emergency team and officials.
- Never hiding in the building.
- Heading to assembly points through escape routes and emergency exits.
- Never running or running over teammates to avoid the occurrence of any injuries.
- Never returning to the building whatsoever until it is clear by authorities.

10-5 What to do when there is a Building Fire?

- Break the fire alarm glass and switch it on.
- Call immediately KSU Department of Safety and Security's operations room at (950) from any landline within the building or (4670950) extension (950) from outside the building.
- Report the fire to the emergency team in the building.

5-11 Safety & Emergency Teams in the Building

- The emergency team consists of college employees in the building, and their presence is mandatory during the daily busy working hours.

I. Characteristics of the Emergency Team

- To be in good health and quick runner.
- To be familiar with the firefighting methods in the building.
- To be familiar with the types of fire extinguishers and how to use them.
- To be calm and not confused.
- To have a strong personality.
- To be bold and witty.
- To be keen on training and raising awareness.

II. Tasks of the Emergency Team

- Asking everyone to stop working immediately.
- Cutting off the electricity to the place if possible or asking the maintenance technicians (electricians) to do it.
- Raising the spirits of the college's employees and making them calm and reassured.
- Keeping periodic maintenance records of automatic alarms and extinguishing devices, and submitting periodic reports for their status to the Safety Department every week.
- Keeping lists of names, numbers and addresses of the college's employees, and the phone numbers of their parents.
- Keeping attendance sheets for counting at the assembly points to check if there are any missing persons.
- Moving the injured people to the assembly area and escorting them to the hospital if necessary.

III. Teams and Responsibilities

A) Evacuation Team

- Dividing the building into areas according to the map, and distributing teams over those areas.
- Selecting a safe assembly point from the previously defined points, and avoiding points near to the danger.
- Reporting to the operation room about the situation on a regular basis.
- The team conducts a comprehensive field survey of its areas to ensure that they are empty and there are no detainees or injuries, and reports them.
- Assessing whether the situation requires intervention by the civil defense.
- Warning everyone not to carry belongings to avoid crowding and prevent risks caused by them, and asking everyone to leave immediately.
- Warning everyone not to scream, stampede, run or bypass their colleagues, so that no injuries will occur.
- Assigning someone to count the number of people present at the assembly point to ensure that there are no detainees inside the

building.

- Guiding those in the building to the escape routes, emergency exits and assembly points.
- Evacuating those in danger and organizing their exit, especially since the building consists of several floors, so everyone should be instructed to leave through the safest and nearest exit.

B - Firefighting Team

- Identifying the location of fires through Fire Alert System signage??????????????
- Dealing with the accident as soon as possible.
- Making sure that the place where you stand does not pose a life risk.
- Carrying out firefighting using the available firefighting equipment in the building.
- Making sure that the windows are closed to prevent the spread of fire to other parts of the building.
- Cooperating with the specialized teams of the civil defense by providing information about the location and type of fire, and available extinguishing equipment and means.
- Reporting of the injured and detainees.

C- Rescue Team

- The medical staff goes from the first-aid clinic to the assembly area with first aid bags.
- Taking information about the locations of detainees and missing persons and saving them, if possible. Assess the situation and decide whether it requires the intervention of the civil defense supporting agencies and informing them upon their arrival about the places of detainees.
- Moving the injured to the assembly area, taking their personal information, providing them with first aid, and escorting them in ambulances and in hospitals until their relatives arrive.

D- Operations and Control Room

- Receiving reports and taking accurate information.
- Contacting and directing the competent authorities such as the “Director of the University for Safety and Security, Civil Defense, Traffic, Police, Ambulance, Maintenance” to the emergency site.
- Asking all device holders not to skip operations or cut wireless signals.???? What device? What operations?
- Giving priority to the emergency reports, then other less urgent reports.
- Reporting the received information about detainees, injured, etc.

E – The University Traffic and Parking Department

- Receiving reports from the operations and control room.
- Organizing traffic within the university.
- Preventing cars from entering the emergency area.
- Withdrawing cars that disrupt traffic or obstruct emergency vehicles.
- Controlling the entrances of the university.
- Directing and guiding emergency vehicles to the emergency location.

F - Duties of the Security Unit

- Taking the organizational information from the University Safety and Security Department and the required plan for execution.
- Securing the building and maintaining order.
- Surrounding the area to keep the bystanders away and prevent gathering.
- Preventing anyone other than the specialized personnel from entering the building. (Allowing specialized personnel only to enter the building).
- Waiting for the competent teams to guide them to the emergency location.

G- Means and Equipment required in the Building

- The building assembly points must be identified by placing boards at their locations and guiding signs to their sites.
- Boards of assembly points and other boards indicate them should be placed. (Repeated, same as the first point).
- Emergency doors and stairs must be numbered.

- Signs indicating emergency exits on the ground (phosphorescent signs) must be placed.
- Ensuring that first-aid firefighting devices for all types of fires are available and suitable for immediate use.
- Checking and maintaining alarms and automatic extinguishing devices and signs indicating emergency exits on a regular basis, and making a schedule for them which is kept at the office of Director of the Administration, Emergency Team and Director of University for Safety and Security.
- Ensuring that first aid kits are available.
- Equipping the emergency doors with handles making them open outwards.
- Posting instructional signs for safe use of elevators.

H- The Responsible University Departments for Operating the Facilities

- The building maintenance technicians (electricians) disconnect the electricity supply.
- The Plantation Department, in coordination with the Public Water Corporation, is responsible for providing the building with water supply in case the water or sewage network is damaged.
- The Nutrition Department at the Deanship of Student Affairs, in coordination with the relevant departments, is responsible for providing shelter sites with drinking water, nutrition and accommodation requirements.
- Technicians of the Operation and Maintenance Department, Safety and Security Personnel, Transportation Department and Cleaning Department are present at the site continuously as required.

I- Drills

After preparing the scenario for emergency cases, they are executed using Early Warning points, and monitoring the reaction of the formed teams to manage emergency cases and the behavior of the college employees. The monitoring is conducted through direct coordination between the competent agencies at the university and the relevant public agencies such as (Civil Defense, Ambulance, ... etc.).

J- Evaluation of Outcomes

Evaluating the performance level of the formed teams for emergency situations, identifying the errors occurred, and monitoring the negative points to take advantage of them in developing urgent solutions to avoid them in the future.

6- Report of the 1st Mock Evacuation Drill of Building (3), the College of Engineering

On Wednesday 3/25/1439 AH corresponding to 12/13/2017 AD, at 11:30 a.m., the College of Engineering implemented a mock evacuation plan for the entire college building, assuming a fire with chemical and radiation leaks occurred in one of the faculty's laboratories (Joint Operations Laboratory, Chemical Engineering Department), with the participation of the following authorities:

- Occupational Safety Committee, College of Engineering
- KSU risk management
- University Safety and Security Department
- Civil Defense Department, KSU branch
- University Maintenance Department, Emergency Department, King Khalid University Hospital
- Committee for the Prevention of Chemical and Biological Pollution
- Committee for the Prevention of Radioactive Pollution
- General Administration of Services and Facilities

6-1 Preparations for the Mock Evacuation Drill

- The College of Engineering's Occupational Safety Committee held several sessions, during which the mock evacuation drill was developed and prepared.
- The College of Engineering's Occupational Safety Committee held several joint meetings with the authorities relevant to the evacuation process (as indicated above) in order to ensure the success of the drill.
- An emergency call directory containing all the event participants' names and phone numbers (mobile and landline), from inside and outside the college, was created to facilitate communication in times of emergency and during the drill.
- In cooperation with the KSU Risk Management Department and the Safety and Security Department, a workshop (theoretical and practical) was held for all college employees and students to be educated and trained practically on how to act during emergencies and how to use fire extinguishers of all kinds.

- The number of people present in the building was taken during the drill period, as shown in Table 2.

Table 2: The number of students and employees in all departments, units and centers of the college during the drill day

Floor	No. of Building Occupants		
	Employees, faculty members and the like (department employees)	Students	People with special needs
Ground	102	377	1
First	49	1226	1
Second	233	64	3
Total	384	1667	5

6-2 Raising Awareness of the College of Engineering Employees and Students about the Effectiveness of the Building Mock Evacuation

- Announcing the date of the drill, how to act during it, and the locations of assembly points through banners and leaflets distributed to everyone.
- Students at lecture rooms were taught about the event.
- The event information was published on the college's website and social media.
- Daily e-mails were sent to inform the college employees and students about the event.

6.3 Conducting Mock Evacuation Drill

The drill was carried out successfully, praise be to Allah, as it started by sounding the alarm all over the college at 11:30 a.m. announcing the occurrence of an emergency at which the Dean of the College announced the necessity of the immediate evacuation of the college building. Concurrently, the university operating room was notified, which summoned all the concerned agencies. All teams participating in the event arrived at the scene within a record time, as per table No. 3.

Table 3: The response speed of the emergency concerned agencies within the mock evacuation drill of the entire building of the College of Engineering

The Mock Evacuation Drill of the entire Building of the College of Engineering, Wednesday 25/3/1439AH; 13/12/2017 AD			
Mission		Access Time	Time
1	The time of announcing the state of emergency	11:30	The announcement was made directly with the accident
2	Ambulance arrival time	11:37	7 minutes
3	The civil defense vehicle arrival time	11:34	4 minutes
4	The radiation Leakage Control Committee arrival time	11:33	3 minutes
5	The Chemical Leakage Control Committee arrival time	11:33	3 minutes
6	The time for the last person to leave the Building	11:37	7 minutes
7	The time for evacuating the injured to the hospital after first aid	11:35	13 minutes
8	Time to end the state of emergency and allow people to reenter the building	11:53	23 minutes

At 11:53 a.m., the Dean of the College has announced, in agreement with the concerned agencies, that the situation is under control, and everything is normal, and the building is safe to reenter.

6.4 Evaluating the Outcomes of the Mock Evacuation Drill

The drill was immediately followed by a meeting for the entire team involved in preparing and supervising the evacuation event, where:

- the time taken to completely evacuate the college building was discussed.
- the response time of the relevant authorities was recorded.
- notes on the drill were taken and negatives were identified to be corrected in the future.

The college's benefits from the experience can be shown as follows:

- Training on how to communicate with the concerned agencies at the occurrence of an emergency, God forbid.
- Forming an experienced emergency team in the college.
- Removing fear of college employees and students when facing emergency situations.
- Increasing the capabilities of the college's employees and students to find emergency exits and gathering points.
- The drill has shown the necessity to provide evacuation devices for people with special needs (a chair for the evacuation of the handicapped).

7- Identifying and assessing Risks and developing Preparedness Plans for the College of Engineering Units

Referring to the Supreme Order No. 9895 in 02/21/1440 AH to establish the National Risks Board, the Executive Committee, the National Risks Unit, and the Minister of Education's circular No. 58238 in 1440 AH approving the decisions of the National Risks Unit Committee that each entity shall be responsible for identifying its own risks within its responsibilities and tasks, evaluating them, and developing preparedness and response plans to prevent their effects according to the methodology approved by the National Risks Unit. The College Vice Deanship for Development and Quality surveyed the views of the college departments, units, centers, and employees about the potential risks in the college. The survey resulted in identifying and evaluating the risks, and developing plans to confront them if occurred as follows:

First: Risks caused by human errors.

Second: Risks caused by lack of or poor maintenance of equipment and buildings.

Third: Risks caused by the lack of coordination between the agencies responsible for the building.

Fourth: Risks of losing documents and information.

Fifth: Risks from outside the college (security risks, natural risks, health risks).

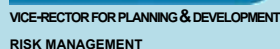
The following tables show the identification and evaluation of potential risks, their impact, their description, the means to mitigate their impact when they occur, God forbid, and the leader responsible for the risk, followed directly by the evacuation maps, emergency exits and assembly points.

RISK ASSESSMENT FORM

Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

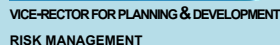
Dependent Agency: College of Engineering

RISK LIKELIHOOD RATE																																		
I. Likelihood of Risks Caused by Human Error (1) Lack or Absence of Experience or Knowledge	Level of Risk	Likelihood	Impact	Score	RESPONSIBLE AGENCY COLLEGE OF ENGINEERING Head of Department × Faculty Members × Technicians × Occupational Safety Committee Dean Others (Identify):																													
	Extreme (5)			16																														
	High (4)	×	×																															
	Medium (3)																																	
	Low (2)																																	
	Very Low (1)																																	
Risk Impact <ul style="list-style-type: none"> - Human injuries - Fire - Losses of property - Environmental pollution 																																		
Description of Risk (Current Situation) <ul style="list-style-type: none"> - Lack of familiarity with safety procedures for laboratory technicians, faculty members, and students. - Lack of familiarity with the way to operate devices and equipment in a safe manner. - Places of fire extinguishers, safety equipment and emergency exits are unknown. - Lack of familiarity with the minimum requirements for first aid. - Failure to respond to alarm bells or building evacuation orders. 		Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and measures of confronting risks <ul style="list-style-type: none"> - Making signage for safety procedures. - Preventing non-specialists from operating appliances and equipment. - <u>Storing different types in the same place.</u> - Holding training courses in first aid. - <u>Smoking within the workplace</u> - Holding specialized and mandatory training courses in laboratory safety procedures for faculty members, technicians, and students. - Specifying the first lecture of laboratory courses for safety procedures. - Providing specialized training on new devices by the supplier. - Making signage for places of fire extinguishers, safety equipment, and emergency exits. - Performing scheduled mock emergency drills to intensify knowledge of safety equipment, procedures and emergency exits - <u>Using poorly made (personal) chargers and electrical connections.</u> - Providing intensive training for new users. - <u>Random distribution of devices within the workplace.</u> - <u>Heating food or making drinks within the workplace.</u> - Accountability of those who don't respond to evacuation orders or warning bells. 			TYPE OF RISK <table border="1"> <tr><td>Medical</td><td></td></tr> <tr><td>Chemical</td><td></td></tr> <tr><td>Fire</td><td></td></tr> <tr><td>Legal</td><td></td></tr> <tr><td>Financial</td><td></td></tr> <tr><td>Health</td><td></td></tr> <tr><td>Construction</td><td></td></tr> <tr><td>Documents & Info</td><td></td></tr> <tr><td>Security</td><td></td></tr> <tr><td>Human Resources</td><td>×</td></tr> <tr><td>Natural</td><td></td></tr> <tr><td>Transportation</td><td></td></tr> <tr><td>Biological</td><td></td></tr> <tr><td>Others (Identify):</td><td></td></tr> </table>		Medical		Chemical		Fire		Legal		Financial		Health		Construction		Documents & Info		Security		Human Resources	×	Natural		Transportation		Biological		Others (Identify):	
Medical																																		
Chemical																																		
Fire																																		
Legal																																		
Financial																																		
Health																																		
Construction																																		
Documents & Info																																		
Security																																		
Human Resources	×																																	
Natural																																		
Transportation																																		
Biological																																		
Others (Identify):																																		



Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

RISK LIKELIHOOD RATE											
I. Likelihood of Risks Caused by Human Error (2) Taking the right decision at the right time ❖ Risk Impact <ul style="list-style-type: none">- Human injuries- Fire- Equipment Damage- Building Damage				Level of Risk		Likelihood	Impact	Score	RESPONSIBLE AGENCY		
				Extreme	(5)			12	COLLEGE OF ENGINEERING		
				High	(4)		X		Head of Department		X
				Medium	(3)	X			Faculty Members		X
				Low	(2)				Technicians		X
				Very Low	(1)				Occupational Safety Committee		X
								Dean	X	Others (Identify):	
❖ Description of Risk (Current Situation) <ul style="list-style-type: none">- Failure to identify the dangerousness of the materials used in laboratories.- Failure to dispose of consumed and damaged materials at the right time.- Failure to make the decision of partially or completely evacuating the college building in case of risk.				❖ Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and measures of confronting risks <ul style="list-style-type: none">- Labeling each substance indicating its name and level of risk.- Attaching the standard safety data sheet for dealing with hazardous materials.- Heating food or making drinks within the workplace.- Introducing strict and binding regulations to prevent consumed materials from being stored in an inappropriate and unsafe place.- Continuous monitoring.- Forming an emergency team represented by all the college units to deliver accurate information at the right time to the evacuation decision maker.				TYPE OF RISK			
								Medical			
		Chemical									
		Fire									
		Legal									
		Financial									
		Health									
		Construction									
		Documents & Info									
		Security									
		Human Resources		X							
		Natural									
		Transportation									
		Biological									
		Others (Identify):									



Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

RISK LIKELIHOOD RATE							
I. Likelihood of Risks Caused by Human Error (3) Poor Storage	Level of Risk		Likelihood	Impact	Score	RESPONSIBLE AGENCY	
	Extreme	(5)			12	COLLEGE OF ENGINEERING	
	High	(4)		✕		Head of Department	✕
	Medium	(3)	✕			Faculty Members	
	Low	(2)				Technicians	

❖ Risk Impact	Very Low	(1)			
<ul style="list-style-type: none">- Fire- Damage of stored materials- Human injuries- Environmental pollution					

RISK ASSESSMENT FORM

Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

Dependent Agency: College of Engineering

RISK LIKELIHOOD RATE						
I. Likelihood of Risks Caused by Human Error (4) Misuse of available space ❖ Risk Impact <ul style="list-style-type: none"> - Human injuries - Equipment damage - Fire - Building damage 	Level of Risk	Likelihood	Impact	Score	RESPONSIBLE AGENCY	
	Extreme	(5)			COLLEGE OF ENGINEERING	
	High	(4)	×		Head of Department	
	Medium	(3)	×		Faculty Members	
	Low	(2)			Technicians	
	Very Low	(1)			Occupational Safety Committee	×
					Dean	
					Others (Identify): General Directorate of KSU Safety & Security	×
❖ Description of Risk (Current Situation) <ul style="list-style-type: none"> - Random distribution of devices within the workplace. - Disabling emergency exits or placing obstacles in front of them. - Using the roof and spaces inside the facility to store consumed materials. 	❖ Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and measures of confronting risks <ul style="list-style-type: none"> - Continuous inspection visits to the college facilities by the college's Occupational Safety Committee and taking the required measures. 				TYPE OF RISK	
					Medical	
					Chemical	
					Fire	
					Legal	
					Financial	
					Health	
					Construction	
					Documents & Info	
					Security	
					Human Resources	×
					Natural	
					Transportation	
					Biological	
					Others (Identify):	

RISK ASSESSMENT FORM

Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

Dependent Agency: College of Engineering

RISK LIKELIHOOD RATE						
I. Likelihood of Risks Caused by Human Error (5) Personal Misbehavior ❖ Risk Impact <ul style="list-style-type: none"> - Fire - Allergy and diseases - Human injuries - Unpleasant odors 	Level of Risk	Likelihood	Impact	Score	RESPONSIBLE AGENCY	
	Extreme	(5)			COLLEGE OF ENGINEERING	
	High	(4)	X	X	Head of Department	
	Medium	(3)			Faculty Members	
	Low	(2)			Technicians	
	Very Low	(1)			Occupational Safety Committee	
					Dean	X
					Others (Identify):	
❖ Description of Risk (Current Situation) <ul style="list-style-type: none"> - Smoking within the workplace. - Heating food or making drinks within the workplace. - Using poorly made (personal) chargers and electrical connections. 	❖ Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and measures of confronting risks <ul style="list-style-type: none"> - Specifying areas of smoking - Implementing the penalties issued by KSU on the violators - Continuous inspection visits to the college facilities by the college's Occupational Safety Committee and taking deterrent measures - Emphasis on purchasing and using high quality materials 				TYPE OF RISK	
					Medical	
					Chemical	
					Fire	
					Legal	
					Financial	
					Health	
					Construction	
					Documents & Info	
					Security	
					Human Resources	X
					Natural	
					Transportation	
					Biological	
					Others (Identify):	

RISK ASSESSMENT FORM

Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

Dependent Agency: College of Engineering

RISK LIKELIHOOD RATE						
II. Potential risks caused by poor equipment and buildings or lack of their maintenance: (1) Lack of effective periodic maintenance ❖ Risk Impact <ul style="list-style-type: none"> - Building and / or equipment damage - Human injuries - Environmental pollution - Loss of electronic information - Lack of concern when real risk occurs 	Level of Risk	Likelihood	Impact	Score	RESPONSIBLE AGENCY	
	Extreme	(5)			COLLEGE OF ENGINEERING Head of Department <input checked="" type="checkbox"/> Faculty Members Technicians Occupational Safety Committee <input checked="" type="checkbox"/> Dean Others (Identify): Maintenance Department, Committee for the Prevention of Chemical and Biological Pollution, Committee for the Prevention of Radioactive Pollution <input checked="" type="checkbox"/>	
	High	(4)		X		
	Medium	(3)	X			
	Low	(2)				
	Very Low	(1)				
❖ Description of Risk (Current Situation) <ul style="list-style-type: none"> - Setting off alarms without reason - Water leak - Gas or chemical leak - Radiation leak - Power outage without warning 	❖ Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and measures of confronting risks <ul style="list-style-type: none"> - Coordination with the Security and Safety Department and the Maintenance Department to prevent it - Coordination with the Maintenance Department to address it - Activating the college's Emergency and Evacuation Plan, contacting the KSU Committee for the Prevention of Chemical and Biological Pollution, as well as contacting the KSU Committee for the Prevention of Radioactive Pollution and other relevant bodies - Not leaving any device that causes uncontrolled danger in the event of power outage - Contacting the Maintenance Department when any power outage occurs 				TYPE OF RISK	
					Medical	
					Chemical	
					Fire	
					Legal	
					Financial	
					Health	
					Construction	
					Documents & Info	
					Security	
					Human Resources	
					Natural	
					Transportation	
					Biological	
					<input checked="" type="checkbox"/>	

RISK ASSESSMENT FORM

Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

Dependent Agency: College of Engineering

RISK LIKELIHOOD RATE						
III. Potential risks caused by lack of coordination between the authorities responsible for the building: (1) Lack of coordination between the authorities responsible for the building (Safety & Security, Maintenance, College Administration) ❖ Risk Impact <ul style="list-style-type: none"> - Thefts - Building and contents damage - Lack of concern when the real risk occurs 	Level of Risk	Likelihood	Impact	Score	RESPONSIBLE AGENCY	
	Extreme	(5)			COLLEGE OF ENGINEERING Head of Department Faculty Members Technicians Occupational Safety Committee Dean Others (Identify): Department Manager at College	
	High	(4)		X		
	Medium	(3)	X			
	Low	(2)				
	Very Low	(1)				
❖ Description of Risk (Current Situation) <ul style="list-style-type: none"> - Setting off alarms without reason - Water leak - Gas or chemical leak - Radiation leak - Power outage without warning 	❖ Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and measures of confronting risks <ul style="list-style-type: none"> - Coordination with the relevant authorities at the university to install: <ul style="list-style-type: none"> ○ Surveillance cameras ○ Smart doors for college entrances and exits - Increasing the number and spreading of security and safety personnel in and around the college - Coordination with the KSU maintenance department to prevent this 				TYPE OF RISK	
					Medical	
					Chemical	X
					Fire	X
					Legal	
					Financial	X
					Health	
					Construction	X
					Documents & Info	X
					Security	
					Human Resources	
					Natural	
					Transportation	
					Biological	X

RISK ASSESSMENT FORM

Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

Dependent Agency: College of Engineering

RISK LIKELIHOOD RATE						
IV. Potential risks caused by loss of documents and information: (1) Damage to computers and backup devices ❖ Risk Impact <ul style="list-style-type: none"> - Loss of documents and information - Hardware damage - Human injuries 	Level of Risk	Likelihood	Impact	Score	RESPONSIBLE AGENCY	
	Extreme	(5)			COLLEGE OF ENGINEERING Head of Department Faculty Members Technicians Occupational Safety Committee Dean Others (Identify): KSU Maintenance Directorate, Deanship of E-Transactions, Building Occupants X	
	High	(4)		X		
	Medium	(3)	X			
	Low	(2)				
	Very Low	(1)				
❖ Description of Risk (Current Situation) <ul style="list-style-type: none"> - External cyber attacks - Power outage without warning - Fire - Power cuts out without warning - Lack of quality of computers and external storage devices - Failure to activate backup of documents and information 	❖ Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and measures of confronting risks <ul style="list-style-type: none"> - Cooperating with the Deanship of Electronic Transactions to install effective protection software - Educating computer users about the risk of disconnecting the secure domain of KSU computers - Making electronic backups of documents and information periodically - Ensuring the good quality and specifications when submitting purchasing orders of computers and external storage devices - Providing automatic and continuous backup devices for documents and information 				TYPE OF RISK	
					Medical	
					Chemical	X
					Fire	X
					Legal	
					Financial	X
					Health	
					Construction	X
					Documents & Info	X
					Security	
					Human Resources	
					Natural	
					Transportation	
					Biological	X
					Others (Identify):	

RISK ASSESSMENT FORM

Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

Dependent Agency: College of Engineering

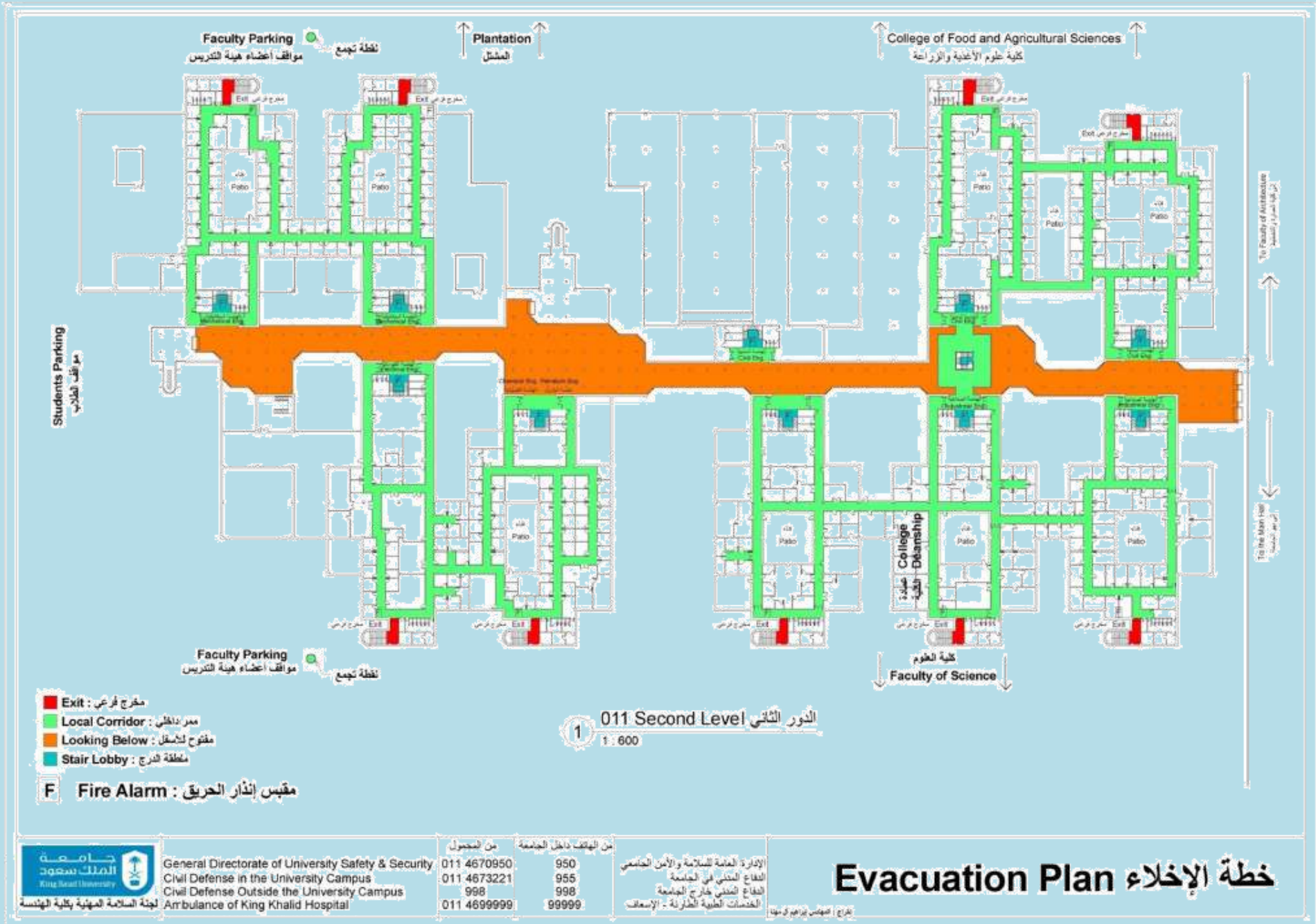
RISK LIKELIHOOD RATE																																		
V. Likelihood of Out-of-the-Campus Risks (Security & Natural) (1) Security Risks ❖ Risk Impact <ul style="list-style-type: none"> - Loss of private property - Loss of public property (custody) - Human injuries - Building and facilities damage 	Level of Risk	Likelihood	Impact	Score	RESPONSIBLE AGENCY																													
	Extreme	(5)			16	COLLEGE OF ENGINEERING																												
	High	(4)	×	×		Head of Department																												
	Medium	(3)				Faculty Members																												
	Low	(2)				Technicians																												
	Very Low	(1)				Occupational Safety Committee																												
					Dean																													
					Others (Identify): KSU Maintenance Directorate; Manager, Building Occupants	×																												
❖ Description of Risk (Current Situation) <ul style="list-style-type: none"> - Damage to the Building, contents and/or occupants 	❖ Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and measures of confronting risks <ul style="list-style-type: none"> - Coordination with the relevant authorities at KSU to install surveillance cameras. - Coordination with the relevant authorities at KSU to install smart doors for college entrances and exits - Coordination with the relevant authorities at KSU to increase and spread the numbers of security and safety personnel in and around the college 				TYPE OF RISK <table border="1"> <tr><td>Medical</td><td></td></tr> <tr><td>Chemical</td><td></td></tr> <tr><td>Fire</td><td></td></tr> <tr><td>Legal</td><td></td></tr> <tr><td>Financial</td><td></td></tr> <tr><td>Health</td><td></td></tr> <tr><td>Construction</td><td></td></tr> <tr><td>Documents & Info</td><td></td></tr> <tr><td>Security</td><td>×</td></tr> <tr><td>Human Resources</td><td></td></tr> <tr><td>Natural</td><td></td></tr> <tr><td>Transportation</td><td></td></tr> <tr><td>Biological</td><td></td></tr> <tr><td>Others (Identify):</td><td></td></tr> </table>		Medical		Chemical		Fire		Legal		Financial		Health		Construction		Documents & Info		Security	×	Human Resources		Natural		Transportation		Biological		Others (Identify):	
Medical																																		
Chemical																																		
Fire																																		
Legal																																		
Financial																																		
Health																																		
Construction																																		
Documents & Info																																		
Security	×																																	
Human Resources																																		
Natural																																		
Transportation																																		
Biological																																		
Others (Identify):																																		

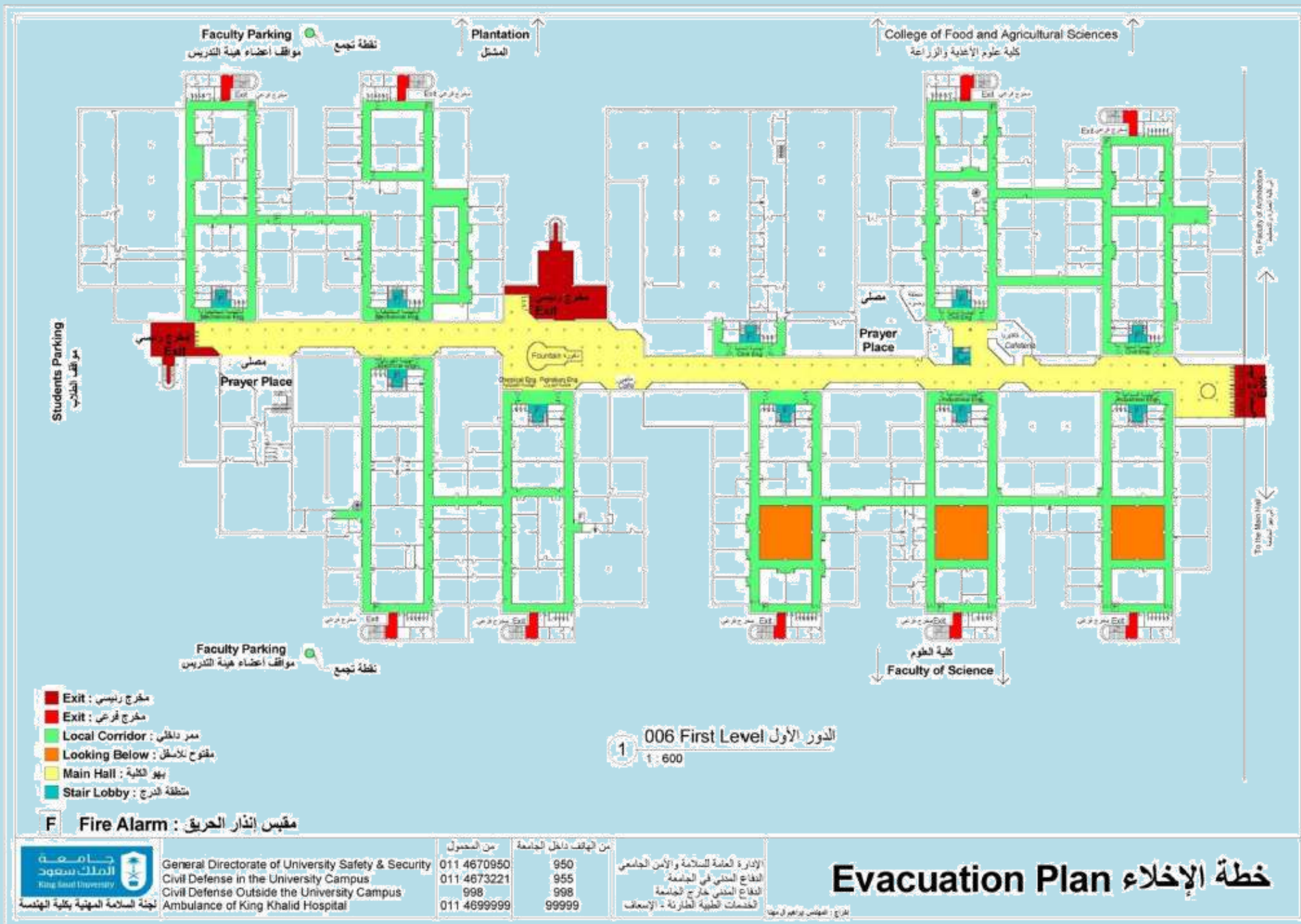
RISK ASSESSMENT FORM

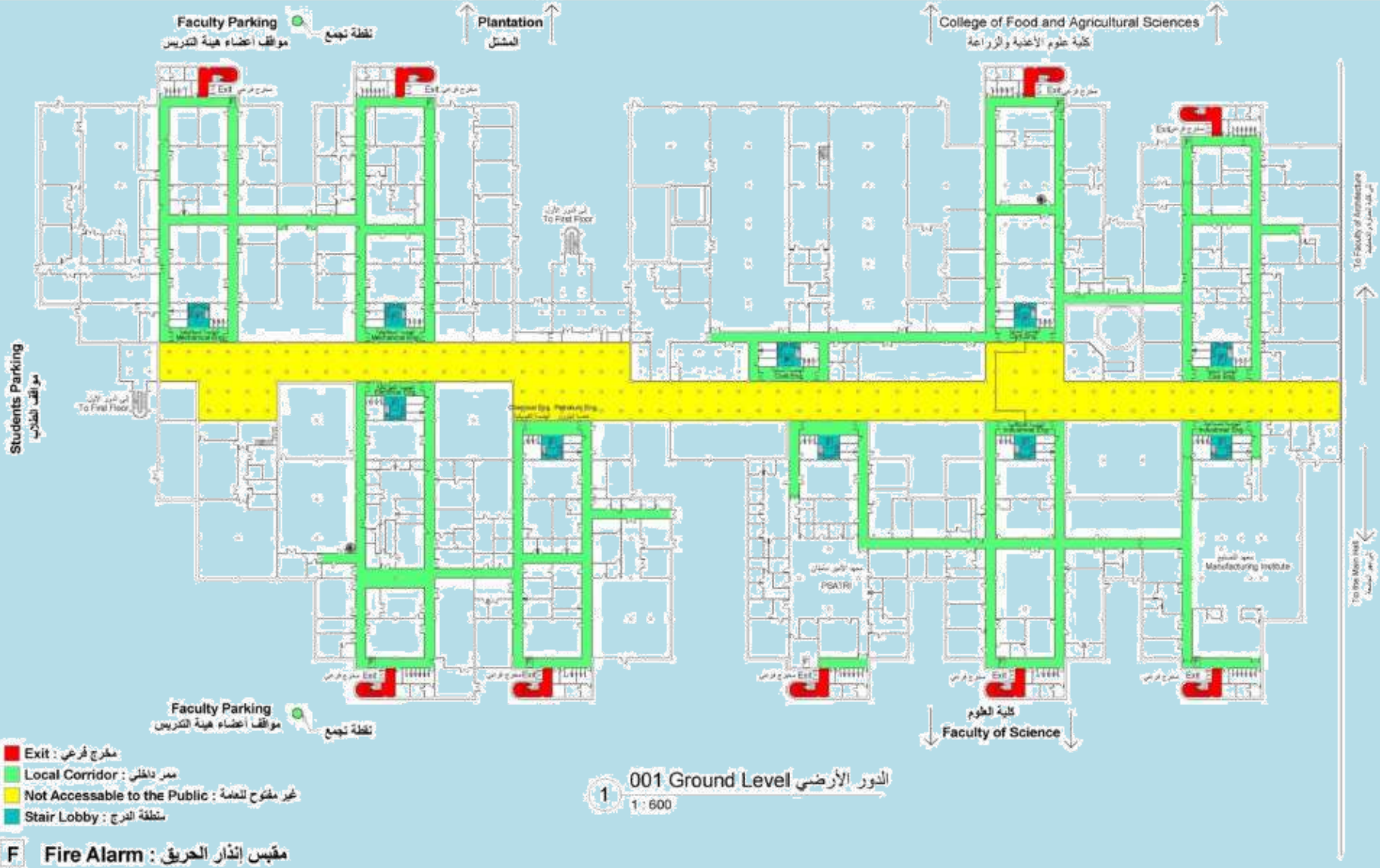
Risk Score= Likelihood x Impact					Likelihood
25	20	15	10	5	Extreme
20	16	12	8	4	High
15	12	9	6	3	Medium
10	8	6	4	2	Low
5	4	3	2	1	Very Low
Extreme	High	Medium	Low	Very Low	Risk Matrix
Impact					

Dependent Agency: College of Engineering

RISK LIKELIHOOD RATE						
V. Likelihood of Out-of-the-Campus Risks (Security & Natural) (2) Natural Risks ❖ Risk Impact <ul style="list-style-type: none"> - Damage to the building and its contents - Human injuries - Health complications 	Level of Risk	Likelihood	Impact	Score	RESPONSIBLE AGENCY	
	Extreme	(5)			COLLEGE OF ENGINEERING	
	High	(4)	×		Head of Department	
	Medium	(3)			Faculty Members	
	Low	(2)	×		Technicians	
	Very Low	(1)			Occupational Safety Committee	
					Dean	×
					Others (Identify):	
					KSU Maintenance Directorate,	
					General Directorate of KSU	×
					Safety & Security	
❖ Description of Risk (Current Situation) <ul style="list-style-type: none"> - Heavy rain - Dust - Strong winds 	❖ Risk Mitigation Policy and Mechanisms: Based on the risk prevention policy and procedures (risk mitigation) of the KSU Risk Management Plan guide and <u>measures of confronting risks</u> <ul style="list-style-type: none"> - The continuous periodic maintenance of the building - Activating the college emergency plan 				TYPE OF RISK	
					Medical	
					Chemical	
					Fire	
					Legal	
					Financial	
					Health	
					Construction	
					Documents & Info	
					Security	
					Human Resources	
					Natural	×
					Transportation	
					Biological	
					Others (Identify):	









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Dr. Mohammed bin Abdullah Almobaraky - Head of the Laboratories and Risk Management Unit

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Emergency Contacts



Civil Defense Inside KSU Campus	955 or 0114673221
Civil Defense Outside KSU Campus	998
Ambulance of King Khalid Hospital	99999 or 0114699999
General Directorate of KSU Safety & Security	950 or 0114670950
Committee for the Prevention of Chemical and Biological Pollution	0114674360
Committee for the Prevention of Radioactive Pollution	0114676633





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Public Education Evaluation Commission



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