

Majmaah IAQ Monitoring System in laboratory

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Since laboratories present a paramount importance in the educational and research process, and for its different daily operations, and uneven level basis of education and Occupational Safety & Health culture of its users, and in order to achieve the objectives of Majmaah University strategic plan; the project of monitoring laboratory indoor air quality emerged to achieve the following objectives:

1. Apply the global requirements for air quality within laboratories.
2. Provide an accurate mechanism to control the students and faculty members exposure to hazardous materials.
3. Support Research field in providing advanced safety means of.
4. Provide a data base of hazardous materials types within the laboratories indoor air which simulates reality significantly.

The phases of the project are three main phases:

1. First phase: is to develop a number of electronic sensors to measure the number of chemical and biological compounds and particles stuck in the air in a number of the laboratories that represent different categories at the university, and evaluate their efficiency and consider the need to increase the involvement of faculty members, researchers and students by making their opinions and suggestions about the development of the system. This phase will begin in 25/03/2015 and its duration is three months.
2. Second phase: is to develop the system and then add sensors to cover the results of the first phase evaluation, and then performed an evaluation of the system after its development.
3. Third phase: is for the final development and its generalization to all the university laboratories.

One of the stressed challenges that encounter this project is in the engineering problems of the laboratories design and their supporting systems and buildings, as well as the large variety of Chemical and biological substances that are used in them and the lack of cooperation of a number of faculty members with the team.

This project presents a great importance for the occupational safety and health in the laboratory environment to support the university staff in performing their assigned work

with a high degree of quality, as well as achieving a distinguished and supportive academic environment for innovation and excellence.