INTRODUCTION
This contribution includes information on the teaching of electromagnetics and related subjects to undergraduate engineering students in several Iraqi universities with considerable emphasis is placed on the teaching of this subject in the University of Technology (UOT)

In Iraq (population 30 million), there are 21 universities and 8 technical colleges and 35 institutes. The basic program in engineering is based on a four-year eight-semester program after finishing high school, which leads to the Degree of Bachelor of engineering science or technology in (Electrical, Mechanical, Chemical, Computer, civil, Engineering etc).

The first year of study is essentially devoted to mathematics, physics, technical English, electrical engineering fundamentals, workshops, introduction to computer and chemistry, and an opening to social sciences and it is nearly common to all students. A three-year program including general engineering topics follows this. This structure is defined by Iraqi law, which also defines—very broadly the main topics to be taught. This ensures a rather uniform structure of study for all Iraqi engineering colleges and schools.

The student backgrounds vary considerably, as they come from many places in Iraq and from the Arabic world as well. Some had advanced courses in mathematics and physics at the high school level, while others did not. Actually the best high schools are located at the capital of the country Baghdad and more than this in some especial places of Baghdad.

Students take the first course in electromagnetic called Electromagnetic Fields, in their second or third year. The textbook that has been used from many years and until this time in most Iraqi universities is Engineering Electromagnetics by William H. Hayt, JR

In fact, the first part of the first course, three lectures one per a week (each lecture of 2 hours duration) is devoted to the physical interpretation of the vector operations, Co-ordinate System, gradient and Del operator, curl and divergence. The rest part of the course begins conventionally with electrostatics including Coulomb law and Electric field density due to different charge distribution, Gauss’s law, and Divergence, Energy and potential, Conductors, Dielectric and Capacitance, Faraday, Poisson, and Ampere, Maxwell's equations, plane waves and boundary value
problems, and ending with transmission lines and wave-guides, following up with the continuity equation and steady currents, magnetostatics (including magnetic media), time-varying fields, Faraday's law of electromagnetic induction, and finishing up with the Poynting vector. Maxwell's stress in free space and in linear media is discussed for both electric and magnetic fields. Of course it is not necessary that all Iraqi Universities follow exactly the same syllabus. Regarding the teaching language generally all the teaching is done in English.

**University Of Technology (UOT)**
The University of Technology one of leading University in Iraq. The beginning of the University dates back to 1960, its name was to Higher Industrial Institute on order from the Ministry of Education in collaboration with the UNESCO. In 1967 it was changed to the College of Industrial Engineering and later to College of Engineering Technology and was incorporated into the University of Baghdad. On 1.4.1975 it was given full independence to be the nucleus of the University of Technology.

In UOT three specialised departments which have EM courses: Electrical Engineering and Electronic Department, Technical Education department and Applied Science Department are taught three hours per week. One-hour-per-week tutorial class is conducted, devoted to discussion initiated by students who have difficulties regarding the problem sheets handed out to them in class (at least a week in advance). While the lectures for this course, which is compulsory for all electrical and electronic engineering (EE) undergraduates, are delivered by one instructor to a class of about 70-80 students, the tutorials are conducted separately for three or more groups of 15-25 students by the course instructor and two course associates, who are all members of the EE faculty.

The course is part of the basic core curriculum, which means that all students in Electrical and Electronics Engineering must take it (those in electronics and communication as well as those in electrical power engineering). The class size is nowadays 70-80 students. This number is not fixed for every year. However, attending courses is compulsory, so those students must be attending at least 85% of lectures in general. What are compulsory 100% is to pass the final exams in the first or in the second attempt. In their third year of study, Electrical and Electronics Engineering students must choose among professional programs in power, or electronics and telecommunication engineering. Those who are decide to chose electronics and telecommunication (typically around 60% of the total third year students) extend their electromagnetics background to microwave devices and networks, antennas, fibre optics, satellite, mobile and radio wave propagation. At this stage, comprehensive lab work is usually undertaken. In the same time some of the final year project s are oriented toward the topics related to the electromagnetic field.
Some issues are common to the students of all Iraqi universities, such as A large number of students find the first course in EM difficult and somewhat theoretical. It seems that in other subjects, especially computers or in information technology and telecommunication, they have moved to applications much sooner. In other words students believe that they will never need those concepts later so their response to EM is often weak at least at first course, perhaps because they are mandatory to all EE students. At this level, the teachers should do their best to stimulate students, perhaps showing more frequently some simple analogies between the electromagnetic phenomena and other physical effects. It is believed also that some simple experiments could be useful.

May be 5% of the very best students shows a real interest in EM and except the challenges in electromagnetic and the related applications to waveguide, microwave devices, propagation, mobile, satellite communications and antennas. During the third and fourth year of study the student interest in EM can be noticed. They choose to do their final year project (2h per a week) in electromagnetics, as well as some of the EM related electives subject in the fourth year. Once they have become involved in the research atmosphere, they tend to stay on for graduate studies, where a selection of advanced courses in EM and related subject are offered.

Until now, the techniques used for teaching have been quite classical: lectures and problems solving. There are no other approaches such as experiments or computer-aided teaching. Unfortunately even simple experiments are not carried out may be in all Iraqi universities regarding the EM and not the related subject. It is very well known that Electromagnetics is a difficult field and it represent frightening dream for many students, resulting in poor grade averages at the exams. The situation in Iraqi universities has been downgrade dramatically during the last 20 years (it is well known why in Iraq). We have a hope that the situation will improve.

Students are advised due to the difficulty of the subject that they should not panic. But instead of that students are invited to read on their own accompanying material in the book. And also to start by solving simple problems, then move to more complicated ones, with a number of competent people around to help them and answer any question that they might ask. This will providing considerable possibilities for interchanges between students, assistants and teacher.

The basic EM course is followed, in the second or third year of studies, by at least four courses of twenty eight hours each on Wave Propagation and Guided Wave, fibber optics, antennas satellite communications, mobile and many other related subjects that are compulsory for students taking the electronics and communications specialisation’s.