

### Are You Interested in Applied Electromagnetics?

# Master of Science (MSc) in Microwave Engineering MSMWE

Lebanese University
Faculty of Sciences I
Faculty of Engineering III
Hadat - Lebanon

### Microwave Engineering in Beirut Now!



The majority of the courses will be held by the department's full professors, most of whom are IEEE members. During the master period, well-known international professors will take over 2 courses.

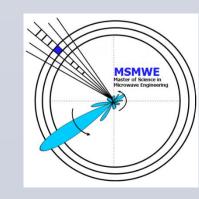
All teaching will be in English. Facilities during class are available for French educated students. For all other application requirements please contact the program director or program manager.

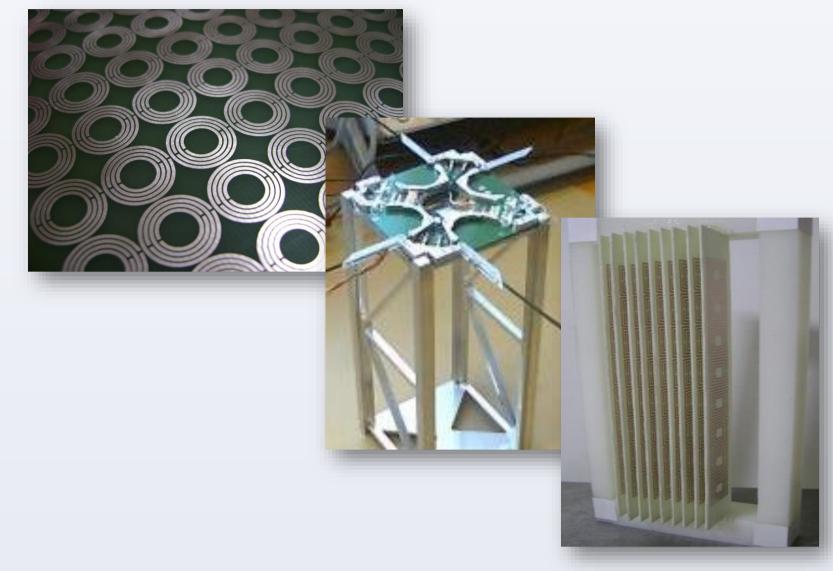


#### Contact

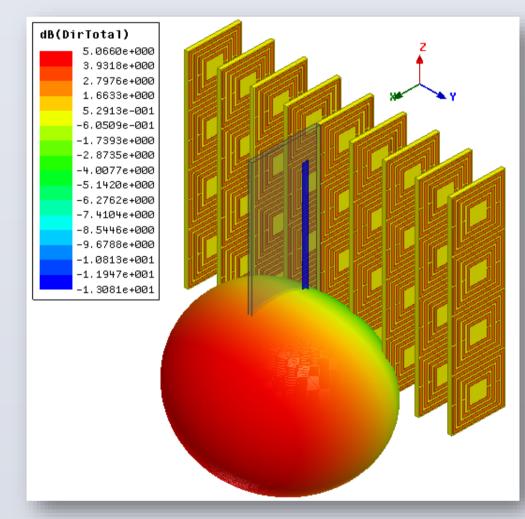
For applications please contact

Program Director
Dr.-Ing. Hussam Ayad
hayad@ul.edu.lb





The microwave technology application has benefited mankind in many ways. Worldwide communications over the microwave links, both terrestrial and satellite based, are common-place. Technologies that started out in expensive military and commercial systems have filtered down to affordable items for the individual consumer, starting with microwave oven to the cellular telephone.



And from the design engineer's side, our ability to model, design, build, and test practical microwave hardware has advanced incredibly, moving from hand-drawn Smith charts to the common place personal computer.

We are also progressing outward in the frequency spectrum. We have always been pushing to make use of higher frequencies. Now we are also moving lower to meet the upward shift in the traditional RF world. Designers in the digital world came to understand they need to learn our secrets as clock frequencies continue to increase. All of these aspects will be covered in this newly established master program.

There is strong demand on microwave engineers and master's students in the following fields:

- Design of Microwave Circuits and Antennas
- •RF & Microwave, Transmission & Communication Networks
- •Wireless Systems and Component Design
- Electromagnetic Compatibility
- Radar System Design and Radar Imaging
- Vehicle Guidance and Remote Control



With studying at the Lebanese University, you will not only get an advanced and up-to-date training, but also profit from its tradition of scientific partnership and co-operation with the industry. A part of our teaching staff has previously worked in the industry. Their industry experience and connections, additionally to their excellent international reputation in their fields, make them first-class lecturers.

The Master of Science in Microwave Engineering program will offer you a good foundation in the fundamental concepts and theory of microwave engineering, an insight into current trends and development of the field and ample opportunities for practical experience.



## egrees

After having successfully completed the program, students will be awarded the "MSc in Microwave Engineering". The degree entitles students to enter PhD programs.

#### **Curriculum and Courses**

The course has a duration of I year (2 semesters). Entrance qualification is Master I or Engineering degree. The program consists of 8 compulsory courses.

The composition of his personal program every student is doing together with his academic supervisor.

During the semester the students can test their knowledge in homework and mid-term exams. At the end of the semester the final exams for each course take place. The program starts every year in October. Semester II is reserved for training period.





#### Courses

The courses will be held in classes of no more than 15 students, in labs and in tutorial groups.

Each student will be provided access to the internet as well as to university libraries.

- Antennas and Propagation
- Microwave Circuit Design
- Advanced Electromagnetic Fields
- Microwave Semiconductor Devices
- •Linear and Non-linear Microwave Circuits
- Computational Methods in Electromagnetics
- Radio Navigation and Location
- Electromagnetic Compatibility

Prepare for the future!
Contribute to the progress
through microwaves!
Join the Master Course in
Microwave Engineering!