course. The academic administrators are Mr. James C. Toler and Dr. Clifford R. Bragdon. The Biomedical Research Division is staffed by engineers, physicists, plus a physiologist and a medical doctor. This staff has extensive experience in electromagnetic wave interactions with biological systems.

Continuing Education Units

Standard Nine of the Southern Association of Colleges and Schools defines a continuing education unit (CEU) as ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction. According to this scale, participants who successfully complete the course will earn 1.4 CEUs for the first session and 2.1 CEUs for the entire course. The Registrar will supply at the participant's request an official transcript of CEUs awarded by Georgia Tech.

Housing, Meals, and Parking

Because Georgia Tech is near the center of Atlanta, many hotels and motels are conveniently located within walking distance of the campus. Although Continuing Education includes full information on nearby accommodations and a campus map in the registration acknowledgment sent to each applicant, the registrant should make reservations directly with the preferred hotel.

Reasonably priced meals are available at campus dining facilities as well as nearby restaurants. Registrants who indicate they will be driving a car to campus will receive a parking permit valid in designated parking areas; however, this permit does not guarantee that parking space will be available.

Course Fee and Registration

The fee schedule is as follows:

First session $275
Entire Course $400

The course fee includes all necessary classroom materials. To qualify for class activities, participants must either pay their own fees or have their organization supply the Department of Continuing Education with proper billing authorization before attending class. If you must cancel your registration, Continuing Education will be able to refund your fees only if we receive notice of withdrawal on or before October 29, 1982.

The Institute reserves the right to cancel this course if there is an insufficient number of registrants by October 29, 1982. In such an event, we will refund the fee in full.

Upon request, the Department of Continuing Education will issue a pass which will make certain athletic facilities and Student Center privileges available to you.

Tax Deduction for Educational Expenses

Treasury regulation 1.162.5 permits an income tax deduction for educational expenses (registration fees and cost of travel, meals and lodging) undertaken to: (1) maintain or improve skills required in one's employment or other trade or business, or (2) meet express requirements of an employer or a law imposed as a condition to retention of employment, rate status or rate of compensation. Consult your tax advisor for details.

Continuing Education 20,000 copies
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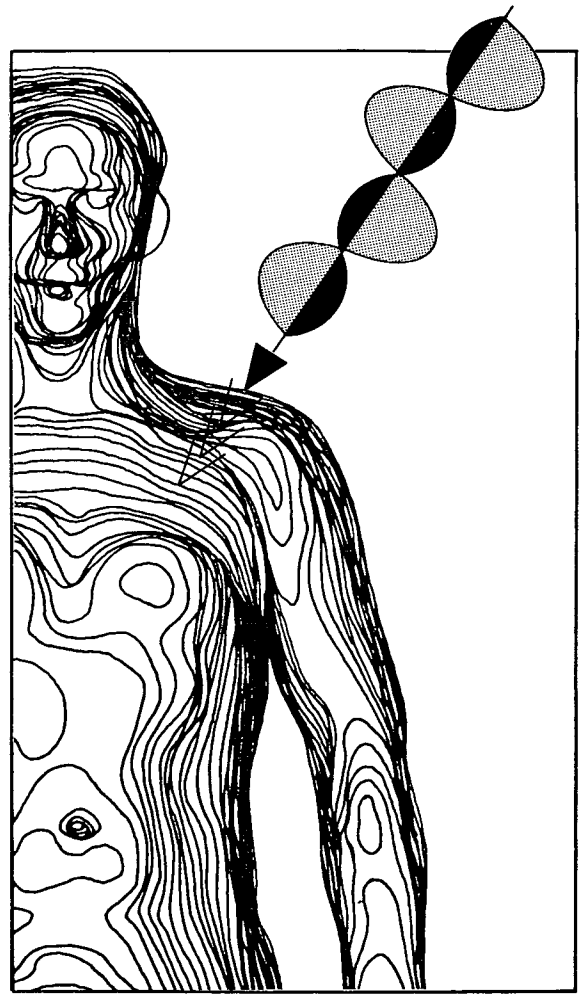
CE83-005

Glaser

Radiation Effects and Medical Applications of Non-Ionizing Electromagnetic Waves

November 9-11, 1982

Continuing Education Courses
Georgia Institute of Technology
A Unit of the University System of Georgia



Course Description

Over the past several years, the public and the scientific community has become concerned regarding the possibility that exposure to relatively low-level, non-ionizing electromagnetic (EM) radiation may adversely affect vital processes in biological systems. The public is further worried by the fact that scientists and researchers are still investigating the mechanisms by which biological systems and EM radiation interact. This concern has resulted in a flurry of litigation against employers who have assigned jobs in areas with high levels of EM radiation, power companies expanding/upgrading their power distribution systems, and military agenices installing new electronic systems. In the scientific community, researchers have expanded their studies in bioelectromagnetic phenomena, resulting in the realization that EM waves have numerous beneficial medical applications.

This course has the three-fold purpose of (1) explaining how EM waves interact with biological systems, (2) presenting current information on the biological effects of exposure to EM waves, and (3) describing beneficial applications of EM waves in medicine and biology. The first purpose is important because, without an understanding of basic interaction mechanisms, there can be no real understanding of biological effects or medical applications of EM waves. The importance of the second purpose lies in the fact that, after a significant amount of research, only a small number of biological effects are known to result from exposure to EM waves. The third purpose is important because of new diagnostic and therapeutic applications of EM waves that are now emerging. With these purposes in mind, the course will first present basic interaction mechanisms. This will be followed by a review of radiation effects and exposure standards. Finally, medical applications of EM waves will be described.

A participant may choose to attend either two days of the course, November 9-10, 1982, or the complete course, November 9-11, 1982. The first two days of the course will be devoted to fundamental considerations of EM waves and bioeffects, and the last day will be devoted to medical applications. Because vital information is given on the first day of class, a participant *cannot* choose to attend only the last day.

Course Outline

Day 1 — Fundamental Considerations

EM Wave Interactions with Tissue
- Physical Considerations
- Biological Considerations

Electrical Properties of Tissue
- Lab Demonstration

Day 2 — Bioeffects

Dose Determinations
Overview of Bioeffects
- Whole Body Level
- Cellular Level

Facilities for Bioeffects Studies
Safe Limits in Exposure Standards

Day 3 — Medical Applications

Electrohyperthermia
Microwave Imaging of Biological Targets
EM Mediation of Growth and Repair Mechanisms

Participants

Persons interested in using electromagnetic energy in the diagnosis and treatment of disease (clinicians, researchers, etc.) will benefit from this course. The course will also provide valuable information for those involved in litigation concerning this subject.

Faculty

Experienced members of Georgia Tech's Biomedical Research Division and Dr. L. Larsen and Mr. J. Jacobi of the Walter Reed Army Institute of Research will teach this

Application Form
Radiation Effects and Medical Applications of Non-Ionizing Electromagnetic Waves

November 9-11, 1982

First Session 1.4 CEUs
Entire course 2.1 CEUs

Full Legal Name _____ *Social Security Number _____
Last First Middle

Organization _____ **Position** _____

Organization Address _____
(for all correspondence) Street City State Zip

County of Residence (if from Georgia) _____ **Organization Phone** _____ **Home Phone** _____

***Race/Ethnic Identification:**
American Indian or Alaskan Native ___
Asian or Pacific Islander ___
Black (not of Hispanic Origin) ___
Hispanic ___
White (not of Hispanic Origin) ___
Other ___

***Age Classification:**
under 22 ___
22 — 35 ___
36 — 55 ___
over 55 ___

***Sex:**
Female ___
Male ___

Course Fee: ☐ Entire Course: $400 ☐ 1st Session: $275
☐ Payment enclosed ☐ Billing authorization enclosed
Registration Deadline: October 29, 1982
Make check payable to: Georgia Institute of Technology.
☐ Check here if you intend to bring a car to campus.
☐ Check here if past course participant
NO PROCEEDINGS WILL BE PUBLISHED

Mail check and application to:
Department of Continuing Education—R
Georgia Institute of Technology
Atlanta, Georgia 30332
Telephone: (404) 894-2400

**Information voluntarily supplied by the participant so that the Institute can comply with various reporting guidelines.*