The two part refresher course is designed to introduce medical physicists, physicians and related health care professionals to fundamental concepts of medical lasers, standards, regulations, quality control procedures, radiation safety program and basic information on recently approved clinical procedures for Photo Dynamic Therapy (PDT). The course will discuss current JCAHO, ANSI standards, FDA, CDRH, OSHA and State regulations for clinical use of medial lasers.

The first part of the course will include details of new ANSI standard Z136.3 and ACMP Report VI which are specifically designed for clinical use of medial lasers in health care facilities. The Quality Control procedures include daily start-up check list, practical "Rules of Thumb" for safe use, output measurements, QC tests, testing of protective devices and operational controls. The Radiation Safety procedures include personnel safety, patient safety, LSO responsiblities, establishment of Nominal Hazard Zones (NHZ), Maximum Permissible Exposure (MPE), Accessible Emission Limit (AEL), laser operator pre-op and post-op check list and laser use log. The other details included are educational and experience criteria for approval of health care professionals for medical laser use, laser bio-effects, beam and non-beam hazards, record and audit forms, laser safety program development and administration.

The second part of the course will include current developments in Photo Dynamic Therapy (PDT). Photo Dynamic Therapy (PDT) is now FDA approved for two clinical indications. Many more clinical trials are in progress and likely will result in further approvals. It is very likely that medical physicists will be called upon for regular testing/certification of the laser systems employed in PDT as well as for treatment planning and optical dosimetry. The purpose of this portion of the presentation is to present a background to PDT. Topics to be covered briefly are the biological, physiological and medical background of PDT. In addition there will be a discussion of current laser/optical delivery systems and optical dosimetry.

Each attendee will receive a copy of the document that contains brief summary of the information presented by the speakers.

## Course Objective

This course is designed to introduce the attendee with the present concepts of use of medical lasers in clinical environment and prepare medical physicists to perform physics related duties as Laser Safety Officer in health care facilities.

The course will provide:

1. Basics and need for Laser Safety Program.
2. Current ANSI/ACMPstandards, Federal and State Regulations.
3. Laser bio-effects and concepts of NHZ, AEL, MPE, etc.
4. QC and RS test procedures.
5. Operational and administrative controls.
6. Educational, didactic and experience criteria for authorized users.
7. Sample copies of record and audit forms.