

## TENTATIVE LASER REPAIR COURSE OUTLINE: (Rev1011)

### Planning Sheet – 2010

*These are all subject to revisions or time changes as needed.*

When you check in to the hotel for a course you'll get a schedule specifically for that week.

**Lunch Each Day at approximately 12 noon, unless otherwise noted, at various restaurants around Columbus.**

A little "buffer time" is built into the schedule by the end of the week, so that if we have technical problems that slow down the class we have enough time to recover. If everything goes smoothly then we have some extra time later in the week that you can choose to do more individual practice on your own if you want, or maybe just break early one day and use that time for study for the test or just relax for a while.

#### Mon Day 1, 8:30 am to 4:30 pm

Mostly Lecture –

**Laser, Energy & Optical Concepts**

Laser & Energy Concepts -

Laser & Electrical Safety –

Lunch – China Bell?

#### Tues Day 2, 8:30am to 4:30 p.m.

Mostly Lecture –

**Lenses & Simple Optics & Cleaning** - lecture & demo

**Intro to Laser Systems & Components & Basic PM Knowledge**

*(Anatomy and Physiology of Major Laser Types)*

CO<sub>2</sub> Laser Subsystems & Components. Review DC and RF excited, and sealed and flowing gas systems. -

**Ion Laser** Subsystems & Components (Argon & Krypton Lasers) -

**Nd:Yag** Laser Subsystems & Components –

(representative of solid state lasers overall, i.e. Alexandrite, Ho:Yag, Er:Yag, etc.)

**1:30 pm. Power Meter Selection & Use –**

**Power Meter Selection & Use - Demonstration –**

**High Voltage Electricity – differentiating characteristics –**

(This is primarily given when we have attendees without electronic experience. Otherwise we omit this lecture)

Laser Orientation, use & accessories TBD – demo "show & tell"

Lunch – Home Town buffet?

**GROUP DINNER** – Provided (estimate 7:30 pm) -TBD

(Dinners are also sometimes held on Weds instead of Tues)

#### Weds Day 3, 8:30am to 4:30 p.m.

**HANDS-ON LABS: Core Laser Skills & Alignments.** – Multiple faculty

**PM's and basic procedures.**

A.M. – Review of test questions, plus short videos of clinical procedures

Working Lunch at Facility Today - Catered

**CO<sub>2</sub>** - divide into near/far alignments, plus arm alignments –

**Argon** - power tweaking, fiber launch alignments, cleaning brewster windows, passbank power supply. Review cooling system. Anode/Cathode Volts to reflect tube pressure. Slit Lamp basics. Tube changeouts. –

**Nd:Yag** - maintenance of laser cavity, changing of lamps, cleaning of flow tubes, power tweaking, alignment of fiber launch. Review cooling system, deionizer cartridges. Lamp replacement. -

**Thurs Day 4, 8:30am to 4:00 p.m.**

A.M. – Review of test questions, plus short videos of clinical procedures

**A.M. - Continue HANDS-ON LAB Exercises as needed.** – Multiple Faculty

Lunch – Memories?

If we're making good time on the labs, we'll start tomorrow's schedule this afternoon. Otherwise this is buffer time for us to catch up if we need to. TBD

**Fri Day 5, 8:30am to 4:00 p.m.**

A.M. – Review of test questions, plus short videos of clinical procedures

**HANDS-ON LABS: Core Laser Skills & Alignments** – Multiple Faculty

**(Stay together in group and rotate as groups)**

- **Ophthalmic Q-Switched Nd:Yag Laser.** - Alignments, power measurement. Beam quality verification, ½ group

- **Ho:Yag Laser,** Maintenance, show & tell. ½ group

- **KTP Lasers: Laserscope, Lumenis,** Maintenance, show & tell, (demo) entire group

Lunch – Dave & Busters?

**Sat Day 6, 8:30am to 4:00p.m.**

A.M. – Review of test questions, plus short videos of clinical procedures

Continue sessions from Friday afternoon if needed. Other TBD. Reset Classroom seating

**1:30 P.M. – Videoconference Lectures – Candela Lasers: Pulsed Nd:Yag, Alexandrite, Dye.**

PM's, Dye Modules & Change outs, Flash lamp replacement, head rebuilds.

Lunch – early – 11:30AM – El Vaquero?

**Sun Day 7, 9:30 am to 3pm**

Carryover morning to complete any things we did not accomplish during the week.

Review of technical points on all lasers, and how to proceed after this course –

Prepare customized “memory sticks” for each student with laser information and class photos. - Greg

**SIGNING OF LASER BOARD BY CLASS -**

**GROUP PHOTO**

Lunch – Joey Chang's? (We're “winging” this part. If we're done early and the group wants to start the review & exam right away, we can either skip lunch and get on with it, and either go to a late lunch after everyone is through with the exam, or not. If we're not caught up on laser work we'll finish that instead)

After Lunch: (unless we finished up early of course, and then we're done)

Course Review and then the Certification Exam Review and Examination (at option of attendee) – Greg Absten

(4 hours is allotted for the exam. Most people finish in 2 to 2.5 hours. You'll know how you did before you leave)

**Mon Day 8, 9am-1pm - Greg**

**NCLE Certification Testing** (if not completed on Sunday)

- If we do take the exam on Sunday, and if someone doesn't succeed on their first test, a second version of the same exam will be offered today so that you can retake it if desired. If you complete it Sunday, you're done.