## Course Objective

### Material Covered:
- Principles of oxygen transport to tissues
- Diving physiology
- Pathophysiology and treatment of decompression sickness, air embolism, carbon monoxide poisoning, radiation tissue damage, HBO Enhanced Wound Healing
- Pathophysiology and treatment of chronic wounds and lymphedema

### Skills Acquired:
- Understanding of oxygen transport to tissues
- Familiarity with chamber environment during simulated dives
- Able to identify clinical uses of hyperbaric oxygen therapy
- Able to identify etiology of chronic wounds
- Able to perform sharp debridement of chronic wounds
- Able to identify etiology of chronic edema
- Place compression bandage on lower extremity
- Able to interpret transcutaneous oximetry test results
- Able to interpret skin perfusion test results

## Activities Of Elective

### Number Of New Patients/Student/Week:
3

### Responsibilities Of Student For Assigned Patients:

<table>
<thead>
<tr>
<th>Does history/physical:</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who critiques:</td>
<td>Attending Physician</td>
</tr>
<tr>
<td>Follows patients, with appropriate notes as needed:</td>
<td>Yes</td>
</tr>
<tr>
<td>Who supervises:</td>
<td>Attending Physician &amp; Research Fellows</td>
</tr>
<tr>
<td>Does student see ambulatory patients:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Procedures

<table>
<thead>
<tr>
<th>Evaluation of injured scuba divers</th>
<th>Observe</th>
<th>Perform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcutaneous oximetry</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Wound debridement</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Assist patients inside hyperbaric chamber</td>
<td>X*</td>
<td></td>
</tr>
<tr>
<td>Use of laser doppler to determine perfusion pressure</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Attend to critically ill patients in hyperbaric chamber</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

* If physically cleared by HBO MD

### Scheduled Duties Of Student:

- Frequency of rounds on patients: As dictated by consultations done
- Presents patients to preceptor or attending physician: yes
- Weekly schedule of required teaching sessions: 2 per week scheduled around clinical duties

### Describe Optional Rounds And Activities, If Any:

- Exposure to hyperbaric chamber environment

### Other Required Activities:

- Reading/review of current literature: Reading and review of current literature
- Other: Participate in ongoing research activities

### How Is Student Evaluated:

Clinical skills, intellectual curiosity, effort and willingness to participate. Assessed in written format per University standard.

### Who Evaluates Students:

Faculty in charge of course, with input from all participating faculty.

### Unique Features Of This Elective:

Exposure to altered environmental conditions which affords application of physiologic principles.