Syllabus

Weld 115 Gas Tungsten Arc Welding

**Time:** Tuesday & Thursdays 1:00 – 3:50 P.M. or 6 - 8:50 P.M.

**Instructor:** Kevin Powers

**Phone:** (760) 744-1150 extension 2565

**Email:** **Kpowers@Palomar.edu**<http://www.palomar.edu/welding/>

**Office Hours:** By Arrangement

**Text Books:**

Gas Tungsten Arc Welding Hobart Institute Of Welding Technology EW369GTAW

**Material Fees:** $50.00 per class

**Equipment:** You will need to provide your own welding hood, safety glasses, welding gloves, and a Vise-Grip type clamp. In addition, proper welding attire is required for entry into the laboratory.

**Required torch parts:**

* 1) 3/32”and 1/8” 2% Thoriated Tungsten
* 1) 3/32” and 1/8” Collet
* 1) 3/32” and 1/8” Collet body
* 1) # 7 Ceramic Cup
* 2) Stainless steel toothbrushes.

This equipment should last you all semester depending on how you take care of it. This equipment is mandatory, it is your responsibility to bring it with you to every class, if you fail to bring it you will be sent home and marked absent unless you return.

**Course Objectives:** Introduction to safe practices, setup, and operation of Gas Tungsten Arc Welding equipment. Gas Tungsten Arc Welding steel and aluminum, sheet metal and plate in flat, horizontal, and vertical positions. No time for personal projects is scheduled.

**Grading Policy:** Welding Lab Assignments 16 @ 5 points

Midterm 1 @ 50 points

Notebook 1 @ 200 points

Final exam 1 @ 50 points

Class Participation 100 points

Total 480 points

**Grading Scale:** 90-100 % = A

* 1. = B

70-79 = C

60-69 = D

Below 60 = F

**Attendance Policy:** Classes will frequently include one-time only demonstrations of procedures and skills, which are necessary for safe and successful completion of the course. If you arrive late, are absent, and/or leave early 3 times before Sept 8th you will be dropped from the course. Attendance is mandatory or you will fall behind. Four absences during the semester will result in failure of the course. The only exception is in the case of official withdraws due to military deployment, etc. **If you know you cannot meet these requirements please drop now.**

**Lab Assignments:** You will be given a lab assignment check off sheet. The lab assignments will be individually paced. The assignments become more difficult as your skill develops. There will be no “skipping” lab assignments.

**Audits:** None.

**Lecture Topics:**

* Safety Test
* GTAW Fundamentals
* GTAW Equipment
* GTAW A/C cycle
* GTAW Electrodes
* GTAW Filler
* GTAW Machine settings
* GTAW Shielding gases
* Joint Design
* Welding symbols
* Welding defects and discontinuities
* Welding Positions
* Alloying Elements of Aluminum
* Visual Inspection

**Important Dates:**

* Aug 24, 2010-First Day
* **Sep 22, 2010 Last day to drop with no grade**
* Oct 12, 2010 Mid-term
* Nov 25, 2010 No class-Thanksgiving
* Dec 13-18, 2010 Final Exams