

**Basic Course Information**

Semester	<b>Fall 2014</b>	Instructor Name	<b>James Gaxiola</b>
Course Title & #	<b>Telecommunications Tech. VIII APTL108</b>	Email	<b>jpgaxiola@iid.com</b>
CRN #	<b>10889</b>	Webpage (optional)	
Room	<b>ECBB</b>	Office	
Class Dates	<b>AUG18-DEC13 2014</b>	Office Hours	
Class Days	<b>Tuesday</b>	Office Phone #	<b>760 482-9857</b>
Class Times	<b>4:30PM-8:30PM</b>	Office contact if student will be out or emergency	<b>760 960-3092</b>
Units	<b>4.00</b>		

**Course Description**

**Instruction in advance installation, configuration, testing, maintaining, troubleshooting and repairing the District’s SCADA, data-communication, revenue meter, and associated power plant systems.**

**Student Learning Outcomes**

**Upon course completion, the successful student will have new skills, knowledge and or attitudes as demonstrated by being able to:**

**Course Objectives**

**Upon satisfactory completion of the course, students will be able to:**

- A.** Understand microwave radio networks
  - 1. Understand microwave radio principles
  - 2. Understand frequency spectrum
  - 3. Understand antenna types/hot standby and space diversity
  - 4. Understand wave propagation/VSWR (voltage standing wave ratio)
  - 5. Understand NMS (network management system)
  - 6. Apply test equipment and diagnostic tools
  - 7. Interpret microwave radio frequency safety
- B.** Understand other safety practices and procedures
  - 1. Request a line outage
  - 2. Request a meter outage
  - 3. Requesting a protection communication circuit outage
  - 4. Interpret PPE requirements and substation work safety procedures
- C.** Understand electronic security
  - 1. Video surveillance and monitoring
  - 2. Understand types of cameras and dvr (digital video recorders)
  - 3. Interpret bandwidth requirements and availability voice traffic/call detail recording
  - 4. Interpret physical access control/intrusion detection

**Textbooks & Other Resources or Links**

Kirk, Franklyn W., Weedon, Thomas A., and Kirk, Philip (2011). *Instrumentation* (5th/e). Homewood, Illinois American Technical Publishers, Inc. ISBN: 978-0826934307

**Course Requirements and Instructional Methods**

Audio Visual

Computer Assisted Instruction

Demonstration

Discussion

Individual Assistance

Lab Activity

Lecture

Simulation/Case Study

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

**Course Grading Based on Course Objectives**

The course grade is based on total points accumulated during the semester. There is a maximum of 100 points. Very limited extra credit points may be available, either through some class participation activity, group work or perfect attendance. Failing to turn in regular assignments will stop you from being able to earn extra credit points and late assignments will have points subtracted. .

Final Grades are calculated as follows:

Percentage	Grade
90-100%	A
80-89%	B
70-79%	C
60-69%	D
Below 60%	F

Points	Grade
90-100	A
80-89	B
70-79	C
60-69	D
Below60	F

Grading Rubrics: In addition to the percentages and points listed above the following grading rubric (standards expected) will be used when grading student assignments. The description that best fits your work will be the assigned grade.

Grade	Rubric or Standard Expected
<b>A</b>	Focused and clearly organized. Contains advanced critical thinking and analysis. Convincing evidence is provided to support conclusions. Clearly meets or exceeds assignment requirements.
<b>B</b>	Generally focused with some development of ideas, but may be simplistic or repetitive. Evidence is provided to support conclusions. Occasional grammatical errors. Meets assignment requirements, but does not exceed.
<b>C</b>	Unfocused, underdeveloped, or rambling, but has some coherence. Minimal evidence is provided to support conclusions. Several grammatical errors. Meets minimum assignment requirements.

<b>D</b>	Unfocused, underdeveloped, and/or rambling. Limited evidence is used to support conclusions. Serious grammatical errors that impede overall understanding. Does not address the assignment requirements
<b>F</b>	Unfocused, underdeveloped, and/or rambling. Incomplete or too brief. No evidence is used to support conclusions. Serious grammatical errors that block overall understanding. Does not meet assignment requirements. Minimal to no student effort.

Late Assignments will be accepted until the graded assignment is returned to the class, but assessed a penalty of 5 points per calendar day it is late.

### Attendance

#### Required language

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

### Classroom Etiquette

#### Required Information --Discretionary language

**This is where an instructor explains his/her policy on these matters. Here is some suggested language:**

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor. **Consider:** specifics for your class/program
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

### Academic Honesty

#### Required Language

- Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to 'cite a source' correctly, you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report

the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

### Additional Help – Discretionary Section and Language

- **Blackboard** support center: <http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543>
- **Learning Labs:** There are several ‘labs’ on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the Math Lab, Reading & Writing Lab, and Study Skills Center (library). Please speak to the instructor about labs unique to your specific program.
- **Library Services:** There is more to our library than just books. You have access to tutors in the Study Skills Center, study rooms for small groups, and online access to a wealth of resources.
- **Additional Help:** The student can request additional time to review the subject matter or prepare for an exam.

### Disabled Student Programs and Services (DSPS)

**Required Language:** Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313, if you feel you need to be evaluated for educational accommodations.

### Student Counseling and Health Services

**Required Language:** Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see <http://www.imperial.edu/students/student-health-center/>. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

### Student Rights and Responsibilities

**Required Language:** Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities, please refer to the IVC General Catalog available online at [http://www.imperial.edu/index.php?option=com\\_docman&task=doc\\_download&gid=4516&Itemid=762](http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762)

### Information Literacy

**Required Language:** Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/>

### Anticipated Class Schedule / Calendar

Below is a list of weekly activities and assignments that will assist you in meeting the course objectives and the Student Learning Outcomes. Please review carefully and often as the list may reading assignments, exams, field trips, projects, presentations, etc.

Imperial Valley College Course Syllabus – Course Title and number

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<b>Date</b>	<b>Activity, Assignment, and/or Topic</b>	<b>Assignment Due</b>
August 19	Syllabus & Introduction. Week 1-Understand microwave radio principles	August 26
August 26	Week 2-Understand the frequency spectrum	September 2
September 2	Week 3-Understand antenna types/Hot standby and space diversity	September 9
September 9	Week 4-Understand wave propagation/VSWR(voltage standing wave ratio)	September 16
September 16	Week 5-Understand NMS (network management system)	September 23
September 23	Week 6-Apply test equipment and diagnostic tools	September 30
September 30	Week 7-Interpret microwave radio frequency safety. Review for midterm	October 7

October 7	<b>Week 8-Midterm</b> and Understanding other safety practices and procedures(Line outages)	October 14
October 14	Week 9- Understand other safety practices and procedures(Meter outages)	October 21
October 21	Week 10-Understand other safety practices and procedures(communication circuit outage)	October 28
October 28	Week 11-Interpret PPE requirements and substation work safety procedures	November 4
November 4	Week 12- Video surveillance and monitoring	November 11
November 11	Week 13-Understand types of cameras and DVR's(digital video recorders)	November 18
November 18	Week 14-Interpret bandwidth requirements and availability	November 25
November 25	Week 15-Final exam review and Interpret physical access control/intrusion detection	December 2
December 2	<b>Week 16-Final Examination</b>	