Thank you for choosing IVC! We are so happy to join you in your educational journey.

Basic Course Information

Semester:	**Fall 2024**	Instructor Name:	**Jimenez, Javier**
Course Title & #:	**Fiber Optics** **EWIR-096**	Email:	**Javier.Jimenez@Imperial.edu**
CRN #:	**11228**	Webpage (optional):	
Classroom:	**IVC Main Campus** **Room 3110**	Office #:	
Class Dates:	**17 AUG 2024 to 7 DEC 2024**	Office Hours:	**SATURDAYS: 7:30 AM to 8:00AM & 1:20PM to 1:50PM**
Class Days:	**Saturdays**	Office Phone #:	
Class Times:	08:00 AM – 10:05 AM 10:10 AM - 01:20PM	Emergency Contact:	**Javier.Jimenez@Imperial.edu**
Units:	3.00	Class Format:	**Face-to-Face (On Ground)**

Course Description

This course provides student the introduction types of equipment and methods used in fiber-optic cable installation. Student will also understand the operation of various low voltage circuits, configuration, and installation of fiber optics in data acquisition equipment and Remote Transmission units. (Nontransferable, AA/AS degree only)

Course Prerequisite(s) and/or Corequisite(s)

None.

Student Learning Outcomes

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

1. Obtained the C-TECH Introduction to Network Cabling Fiber Optic Based Systems based on the Certification 10 module Exams, and Final Exams Sections 1, 2 & 3. (ILO, ILO)

Course Objectives

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

1. Demonstrate and practice fiber optics.
2. Understand Nine Advantages of Fiber Networks.

3. Understand Properties and Behavior of Fiber Optics Networks.
4. Experimentally validate design, characteristics, and standards of fiber optics.
5. Construct, test, and troubleshoot SM OPGW fiber optic cable.
6. Understand set up, crimp, and polish installation.
7. Understand mechanical splice installation.
8. Understand fusion splice installation.
9. Construct, test and troubleshoot various patch panel & amp splice enclosure

Textbooks & Other Resources or Links

C-Tech - Introduction to Network Cabling Fiber Optic-Based Systems VERSION 4.0. Website - ctechprograms.com
ISBN# 1-7323242-3-9 (It will be provided by your instructor).

Course Requirements and Instructional Methods

Assignments are designed to elicit your demonstration of critical thinking, understanding and application of the course concepts, and your proficiency in the subject matter.

Required Activities or Assignments Points

1. Module Exams (10 total only Module 5 Laboratory):	250 points (50%)
2. Final Exam Section 1 (Laboratory):	100 points (20%)
3. Final Exam Section 2 (Laboratory):	50 points (10%)
4. Final Exam Section 3 (Theory):	100 points (20%)
TOTAL	500 points (100%)

Teaching Methods: Discussion of assignments and instructional methods will be a combination of all methods of instruction, which can be classified as telling, lecturing, or discussing; showing or demonstrating.

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:

Points	Grade
90-100	A

Points	Grade
80-89	B
70-79	C
60-69	D
Below 60	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.

Exam Rubric

Criteria	Ratings						Pts
This criterion is linked to a Learning Outcome Summative Assessment Complies With the Summative Assessment Objectives of evaluating student learning by comparing it against some kind of benchmark or standard of performance	**100 to >90.0 pts** **Excellent** All the answers are correct with no or very few calculation errors, and the calculations steps are correct. Please read Instructors comments after replying.	**90 to >80.0 pts** **Competent** At least 1 answer is incorrect (according to their percentage weight) with no or very few calculation errors, and the calculations steps are correct. Please read Instructors comments after replying.	**80 to >70.0 pts** **Developing** 1 or 2 answers are incorrect (according to their percentage weight) with no or very few calculation errors, and the calculations steps are correct. Please read Instructors comments after replying.	**70 to >60.0 pts** **Beginning** 2 or 3 answers are incorrect (according to their percentage weight) with no or very few calculation errors, and the calculations steps are correct. Please read Instructors comments after replying.	**60 to >1.0 pts** **Needs Improvement** 3 or 4 answers are incorrect (according to their percentage weight) with no or very few calculation errors, and the calculations steps are correct. Please read Instructors comments after replying.	**1 to >0 pts** **Missing** The exam was missing	100 pts
Total Points: 100							

Laboratory Rubric

Criteria	Ratings					Pts
This criterion is linked to a Learning OutcomeThis criterion is linked to a Learning Outcome Summative Assessment Complies With the Summative Assessment Objectives of evaluating student learning by comparing it against some kind of benchmark or standard of performance	**100 pts Excellent** Proper Connector, cable, assembly components, cable length, patch cord integrity, crimp stability, continuity test. Cord Attenuation 1.5dB or less	**95 pts Competent** Proper Connector, cable, assembly components, cable length, patch cord integrity, crimp stability, continuity test. Cord Attenuation 1.5dB or 1.9dB	**90 pts Developing** Proper Connector, cable, assembly components, cable length, patch cord integrity, crimp stability, continuity test. Cord Attenuation 2.0dB to 2.5dB	**85 pts Beginning** Proper Connector, cable, assembly components, cable length, patch cord integrity, crimp stability, continuity test. Cord Attenuation 2.6dB to 3.0dB	**0 pts Needs Improvement or Missing** Proper Connector, cable, assembly components, cable length, patch cord integrity, crimp stability, continuity test. Cord Attenuation Over 3.0dB	100 pts
Total Points: 100						

Course Policies

Attendance

- 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.

Academic Honesty

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- 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 plagiarizing 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 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.

Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- 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 by the instructor.
- 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, only students enrolled in the class may attend; children are not allowed.

How do I act differently if I have an on-ground class during COVID?

1. **DO NOT COME TO CAMPUS OR ATTEND AN OFF-CAMPUS CLASS IF YOU FEEL SICK, HAVE A FEVER, OR HAVE A COUGH**

The CDC recommends the following preventive actions to stop the spread of germs.

- Avoid close contact with people who are sick.
- If you are sick, limit contact with others as much as possible to keep from infecting them.
- Cover coughs and sneezes.
- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- Wash your hands often with soap and water. If soap and water are not available, use an alcohol-based hand rub.
- Avoid touching your eyes, nose, and mouth. Germs spread this way.

- Clean and disinfect surfaces and objects that may be contaminated with viruses that cause flu.
- For flu, CDC recommends that people stay home for at least 24 hours after their fever is gone except to get medical care or other necessities. Fever should be gone without the need to use a fever-reducing medicine.

For more regarding the flu, colds and Covid prevention please visit https://www.cdc.gov.

Students Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC General Catalog.

Other Course Information

Additional Services for Students

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

How do I access services now that we are mostly online?

- CANVAS LMS. Canvas is Imperial Valley College's Learning Management System. To log onto Canvas, use this link: Canvas Student Login. The Canvas Student Guides Site provides a variety of support available to students 24 hours per day. Additionally, a 24/7 Canvas Support Hotline is available for students to use: 877-893-9853.
- Learning Services. In order to accommodate students and maximize student success during the COVID-19 Pandemic, all tutoring support is being provided through one Zoom link (IVC online Tutoring). When campus is open again, there are several learning labs to assist students. Whether you need support using computers, or you need a tutor, please consult your Campus Map for the Math Lab; Reading, Writing & Language Labs; and the Study Skills Center.
- Library Services. Visit the Spencer Library's page on the IVC website for a wealth of valuable resources and online access to databases, e-books and more. Contact us so we can help you with instructional and research development skills (for those conducting research and writing academic papers). When campus re-opens, students also have access to tutoring services in the Study Skills Center as well as private study rooms for small study groups. There is more to our library than just books!
- Career Services Center. The Career Services Center is dedicated to serve all IVC students and Alumni. Services include Career Assessments, Resume and Cover Letter Assistance, Interview Preparation, Internship Opportunities and Job Placement.
- Child Development Center. The Preschool and Infant/Toddler Centers are on-campus demonstration lab programs that meet the educational, research, and service needs of the institution and community at large. The Preschool program (children three to five years of age) and the Infant/Toddler program (newborn to three years of age) is in buildings 2200 and 2300. Service is available to families who meet the California Department of Education qualifications for enrollment. The centers are open during

COVID from Monday-Friday 7:15-5:30. Breakfast, lunch and snack are provided through the California Adult and Child Food Program. Location: Buildings 2200 and 2300. Phone: (760) 355-6528 or (760) 355-6232. Application: IVC Preschool & Infant Toddler Center

Extended Opportunity Program and Services (EOPS)

The Extended Opportunity Program and Services (EOPS) offers services such as priority registration, book grants, transportation assistance, individualized counseling, tutoring, and community referrals to eligible students. Our staff is available to assist and support students in navigating personal, psychological, academic, and/or career-related issues through empathy, cultural-competence, and a commitment to equity and social justice. Also under the umbrella of EOPS is the CARE (Cooperative Agency Resources for Education) Program, designed to serve single parents and assist with addressing issues that are particular to this population. Students that are single parents receiving TANF/Cash Aid assistance may qualify for our CARE program. For additional information about the EOPS or CARE Programs please contact our Program Office 760.335-6407 and/or visit our Program website Extended Opportunities Program & Services for eligibility criteria and application procedures. We look forward to serving you! - EOPS/CARE Staff

Student Equity Program

The Student Equity & Achievement Program strives to improve Imperial Valley College's success outcomes, particularly for students who have been historically underrepresented and underserved. The college identifies strategies to monitor and address equity issues, making efforts to mitigate any disproportionate impact on student success and achievement. Our institutional data provides insight surrounding student populations who historically, are not fully represented. SEA addresses disparities and/or disproportionate impact in student success across disaggregated student equity groups including gender, ethnicity, disability status, financial need, LGBTQIA+, Veterans, foster youth, homelessness, and formerly incarcerated students. The SEA Program also houses IVC's Homeless Liaison, Foster Youth Liaison, Formerly Incarcerated Liaison, and Military Affiliated Liaison, who provide direct services and referrals to students in need. SEA strives to empower students experiencing insecurities related to food, housing, transportation, textbooks, and shower access. We recognize that students who struggle meeting their basic needs are also at an academic and economic disadvantage, creating barriers to academic success and wellness. We strive to remove barriers that affect IVC students' access to enrollment, education, degree and certificate completion, and the ability to transfer to a university. SEA also provides outreach at local Imperial County high schools to ensure graduating seniors are successfully matriculated into the college and have a strong support system. Please visit us online for assistance at Student Equity & Achievement or call us at 760-355-6465 or when campus reopens, visit Building 401.

What if I cannot afford food, books, or need other help?

We have many resources that are available to you. Please tell us what you need by submitting your request(s) here: Student Equity & Achievement

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit http://www.imperial.edu/studentresources or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

Below is a tentative, provisional overview list (the dates and Activities, Assignments and/or Topics are subject to change) of weekly activities and assignments that will assist you in meeting the course objectives and the Student Learning Outcomes.

The instructor will provide a tentative, provisional overview of the readings, assignments, tests, and/or other activities for the duration of the course.

Date	Activity, Assignment, and/or Topic	Assignment Due
August 17	Syllabus & Introduction	
August 17	Module 1- Introduction to Fiber Optic-Based Systems and Safety	
August 24	Module 2- Light and Optics	
August 24 & 31	Module 3- Light Transmission	
August 31	Module 4- Fiber Optic Systems	
September 7	Module 5- Terminating Fiber Optic Cable	
September 7	Module 6- Fiber Optic System Components	
September 14	Module 7- Commercial Cabling Topology and Standards	
September 14	Module 8- Residential Cabling Topologies and Standards	
September 21	Module 9- Placement of Fiber Optic Cable	
September 21	Module 10- Testing and Troubleshooting Fiber Optic Cabling Systems	
September 21	Multiplexing	
September 28	Laboratory Experiments Group 1 (To Be Assign) ST Connectors	
September 28	Laboratory Experiments Group 2 (To Be Assign) ST Connectors	
October 5	Laboratory Experiments Group 1 (To Be Assign) ST Connectors (Cont.)	
October 5	Laboratory Experiments Group 2 (To Be Assign) ST Connectors (Cont.)	
October 12	Laboratory Experiments Group 1 (To Be Assign) SC Connectors	
October 12	Laboratory Experiments Group 2 (To Be Assign) SC Connectors	
October 19	Laboratory Experiments Group 1 (To Be Assign) SC Connectors (Cont.)	
October 19	Laboratory Experiments Group 2 (To Be Assign) SC Connectors (Cont.)	
October 26	Laboratory Experiments Group 1 (To Be Assign) ST & SC Connectors	
October 26	Laboratory Experiments Group 2 (To Be Assign) ST & SC Connectors	
November 2	Laboratory Experiments Group 1 (To Be Assign) ST & SC Conn. (Cont.)	
November 2	Laboratory Experiments Group 2 (To Be Assign) ST & SC Conn. (Cont.)	
November 9	Laboratory Experiments Group 1 (To Be Assign) Pre-polished Connector	
November 9	Laboratory Experiments Group 2 (To Be Assign) Pre-polished Connector	
November 16	Laboratory Experiments Group 1 (To Be Assign) Fiber Optic Splice	
November 16	Laboratory Experiments Group 2 (To Be Assign) Fiber Optic Splice	
November 23	Laboratory Experiments Fusion Splicer & OTDR	
November 30	No Classes	
December 7	Final Exam Section 3 (Theory)	

*****Tentative, subject to change without prior notice*****