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

Basic Course Information

Semester:	**Spring 2021**	Instructor Name:	**Jimenez, Javier**
Course Title & #:	**Fiber Optics** **EWIR-096**	Email:	**Javier.Jimenez@Imperial.edu**
CRN #:	**21608**	Webpage (optional):	
Classroom:	**RT-ONL (Real Time – On Line)** **Up to 1 APR 2021** **3119 Laboratory in Person** **Starting 13 APR 2021**	Office #:	
Class Dates:	**16 FEB 2021 to 10 JUN 2021**	Office Hours:	
Class Days:	**Tuesdays and Thursdays**	Office Phone #:	
Class Times:	06:00 PM – 08:35 PM	Emergency Contact:	**Javier.Jimenez@Imperial.edu**
Units:	4.00	Class Format:	**Hybrid**

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. Familiarize with fiber optics equipment technologies and their installation standards. (ILO, ILO)
2. Describe and program the functions of fiber optics modules and their related equipment according to NFPA standards.(ILO)
3. Analyze and install fiber optics cabling and their respective troubleshooting. (ILO . ILO)
4. Construct, test, and troubleshoot, fiber optics systems for data transmission. (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. Website - ctechprograms.com
ISBN# 0-9789769-7-5
Access to a PDF temporary file of the book will be granted throughout the course, due to the Pandemic.

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.

What if I need to borrow technology or access to WIFI?

1. To request a loaner laptop, MYFI device, or other electronic device, please submit your request here: https://imperial.edu/students/student-equity-and-achievement/

2. If you'd like access the WIFI at the IVC campus, you can park in parking lots "I & J". Students must log into the IVC student WIFI by using their IVC email and password. The parking lots will be open Monday through Friday from 8:00 a.m. to 7:00 p.m.

   Guidelines for using parking WIFI:
   -Park in every other space (empty space BETWEEN vehicles)

-Must have facemask available
-For best reception park near buildings
-Only park at marked student spaces
-Only owners of a valid disabled placard may use disabled parking spaces
-Only members of the same household in each vehicle
-Occupants **MUST** remain in vehicles
-Restrooms and other on-campus services not available
-College campus safety will monitor the parking lot
-Student code of conduct and all other parking guidelines are in effect
-Please do not leave any trash behind
-No parking permit required

If you have any questions about using parking WIFI, please call Student Affairs at 760- 355-6455.

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
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.

What does it mean to "attend" an online class?

Attendance is critical to student success and for IVC to use federal aid funds. Acceptable indications of attendance are:

- Student submission of an academic assignment
- Student submission of an exam
- Student participation in an instructor-led Zoom conference

- Documented student interaction with class postings, such as an interactive tutorial or computer-assisted instruction via modules
- A posting by the student showing the student's participation in an assignment created by the instructor
- A posting by the student in a discussion forum showing the student's participation in an online discussion about academic matters
- An email from the student or other documentation showing that the student has initiated contact with a faculty member to ask a question about an academic subject studied in the course.

Logging onto Canvas alone is NOT adequate to demonstrate academic attendance by the student.

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.

How do I show academic honesty and integrity in an online "classroom"?

- **KEEP YOUR PASSWORDS CONFIDENTIAL.**
  - You have a unique password to access online software like Canvas. Never allow someone else to log-in to your account.
- **COMPLETE YOUR OWN COURSEWORK.**

- When you register for an online class and log-in to Canvas, you do so with the understanding that you will produce your own work, take your own exams, and will do so without the assistance of others (unless directed by the instructor).

Examples of Academic Dishonesty that can occur in an online environment:

- Copying from others on a quiz, test, examination, or assignment;
- Allowing someone else to copy your answers on a quiz, test, exam, or assignment;
- Having someone else take an exam or quiz for you;
- Conferring with others during a test or quiz (if the instructor didn't explicitly say it was a group project, then he/she expects you to do the work without conferring with others);
- Buying or using a term paper or research paper from an internet source or other company or taking any work of another, even with permission, and presenting the work as your own;
- Excessive revising or editing by others that substantially alters your final work;
- Sharing information that allows other students an advantage on an exam (such as telling a peer what to expect on a make-up exam or prepping a student for a test in another section of the same class);
- Taking and using the words, work, or ideas of others and presenting any of these as your own work is plagiarism. This applies to all work generated by another, whether it be oral, written, or artistic work. Plagiarism may either be deliberate or unintentional.

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**
   a. Even if your symptoms are mild, stay home.
   b. Email your instructor to explain why you are missing class.
   c. If you are sick with COVID-19 or think you might have COVID-19, provides CDC guidance.
   d. If you have tested positive for COVID-19, you must self-quarantine for 14 days and then be without symptoms for at least 72 hours. Clearance is required prior to returning to any face-to-face interaction. It is recommended that you undergo a final COVID-19 test to confirm that you are no longer infected.

   e. If you are exposed through direct contact with a person known to be COVID-19 positive, then you must submit negative COVID-19 test results prior to returning to any face-to-face interaction.
2. **ARRIVE AT CAMPUS EARLY (at least 15 minutes early is advised).**
   a. All people entering the IVC campus will need to pass a screening process, which will occur at the gates as your drive onto campus. You will need to take a short questionnaire and get your temperature taken (the screening is completely touchless and will take place while you remain in your car).
3. **BRING A MASK TO CLASS (and always wear it).**
   a. Be sure that your mask covers both your nose and mouth. If your mask is cloth, then wash it each day. If your mask is disposable, then use a new one each day.
4. **GO DIRECTLY TO YOUR CLASSROOM.**
   a. The IVC campus is mostly closed so you should not visit other areas or seek any face-to-face services. Services are available to students online and can be accessed through www.imperial.edu.
5. **WASH YOUR HANDS FREQUENTLY (and use the provided sanitation supplies).**
   a. Your classroom is equipped with cleaning supplies. Use them as needed.
6. **BE SURE TO SOCIAL DISTANCE (stay at least 6 feet from other).**
   a. The number of students in a classroom at any one time is very limited so you have plenty of space to spread and ensure that you stay at least 6 feet from others.
7. **BRING YOUR OWN FOOD AND DRINKS.**
   a. There is no food service currently offered on campus.

Online Netiquette

- What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.
- Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others' opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

How am I expected to act in an online "classroom" (especially Zoom)?
Attending a virtual meeting can be a challenge when there are many students on one conference call. Participating in such meetings may count as class attendance, but disruptive behavior may also result in you not being admitted to future meetings. Follow the tips below for best results:

1) **Be RESPECTFUL**
   a. Your written, verbal, and non-verbal communications should be respectful and focused on the learning topics of the class.
2) **Find a QUIET LOCATION & SILENCE YOUR PHONE (if zooming)**
   a. People walking around and pets barking can be a distraction.

3) **EAT AT A DIFFERENT TIME.**
    a. Crunching food or chugging drinks is distracting for others.
    b. Synchronous zoom times are set in advance so reserve meals for outside class meetings.
4) **ADJUST YOUR LIGHTING SO THAT OTHERS CAN SEE YOU**
    a. It is hard to see you in dim lighting so find a location with light.
    b. If your back is to a bright window, you will be what is called "backlit" and not only is it hard on the eyes (glare) but you look like a silhouette.
5) **POSITION THE CAMERA SO THAT YOUR FACE AND EYES ARE SHOWING**
    a. If you are using the camera, show your face; it helps others see your non-verbal cues.
    b. You may be at home, but meeting in pajamas or shirtless is not appropriate so dress suitably. Comb your hair, clean your teeth, fix your clothes, etc. before your meeting time to show self-respect and respect for others.
6) **Be READY TO LEARN AND PAY ATTENTION**
    a. Catch up on other emails or other work later.
    b. If you are Zooming, silence your phone and put it away.
    c. If you are in a room with a TV – turn it off.
7) **USE YOUR MUTE BUTTON WHEN IN LOUD PLACES OR FOR DISTRACTIONS**
    a. Pets barking, children crying, sneezing, coughing, etc. can happen unexpectedly. It's best if you conference in a private space, but if you can't find a quiet place, when noises arise **MUTE** your laptop.
8) **REMEMBER TO UNMUTE WHEN SPEAKING**
    a. Follow your instructor's directions about using the **"raise hand"** icon or chat function to be recognized and to speak, but make sure you have unmuted your device.
    b. Do not speak when someone else is speaking.
9) **REMAIN FOCUSED AND PARTICIPATE IN THE MEETING**
    a. Especially when the camera is on YOU, we can all see your actions. Engage in the meeting. Look at the camera. Listen to instruction. Answer questions when asked.
    b. Do not use the Zoom meeting to meet with your peers or put on a "show" for them.
10) **PAUSE YOUR VIDEO IF MOVING OR DOING SOMETHING DISTRACTING**
    a. Emergencies happen. If you need to leave the room or get up and move about, stop your video.

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: https://forms.imperial.edu/view.php?id=150958

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 www.imperial.edu/students/eops 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 https://imperial.edu/students/student-equity-and-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: https://imperial.edu/students/student-equity-and-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
February 16	Syllabus & Introduction	

February 18	Module 1- Introduction to Fiber Optic-Based Systems and Safety	
February 23	Module 2- Light and Optics	
February 25	Module 3- Light Transmission	
March 2	Module 4- Fiber Optic Systems	
March 4 to March 9	Module 5- Terminating Fiber Optic Cable	
March 11 to March 16	Module 6- Fiber Optic System Components	
March 18	Module 7- Commercial Cabling Topology and Standards	
March 23	Module 8- Residential Cabling Topologies and Standards	
March 25	Module 9- Placement of Fiber Optic Cable	
March 30	Module 10- Testing and Troubleshooting Fiber Optic Cabling Systems	
April 1	Multiplexing	
April 6	No Classes	
April 8	No Classes	
April 13	Laboratory Experiments Group 1 (To Be Assign) ST Connectors	
April 15	Laboratory Experiments Group 2 (To Be Assign) ST Connectors	
April 20	Laboratory Experiments Group 1 (To Be Assign) ST Continuation	
April 22	Laboratory Experiments Group 2 (To Be Assign) ST Continuation	
April 27	Laboratory Experiments Group 1 (To Be Assign) SC Connectors	
April 29	Laboratory Experiments Group 2 (To Be Assign) SC Connectors	
May 4	Laboratory Experiments Group 1 (To Be Assign) SC Continuation	
May 6	Laboratory Experiments Group 2 (To Be Assign) SC Continuation	
May 11	Laboratory Experiments Group 1 (To Be Assign) ST & SC Connectors	
May 13	Laboratory Experiments Group 2 (To Be Assign) ST & SC Connectors	
May 18	Laboratory Experiments Group 1 (To Be Assign) ST & SC Continuation	
May 20	Laboratory Experiments Group 2 (To Be Assign) ST & SC Continuation	
May 25	Laboratory Experiments Group 1 (To Be Assign) Fiber Optic Splice	
May 27	Laboratory Experiments Group 2 (To Be Assign) Fiber Optic Splice	
June 1	Laboratory Experiments Group 1 (To Be Assign) Pre-polished Connector	
June 3	Laboratory Experiments Group 2 (To Be Assign) Pre-polished Connector	
June 8	Final Exam Section 1 and Final Exam Section 2 (Laboratory)	
June 10	Final Exam Section 3 (Theory)	

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