



Los Angeles Community College District

COURSE OUTLINE

(Replaces PNCR and Course Outline)

Section I: BASIC COURSE INFORMATION

OUTLINE STATUS: Course Update, 2008-2009

1. SUBJECT (DISCIPLINE) NAME¹: ELECTRONICS

(40 characters, no abbreviations)

2. COURSE NUMBER: 119

3. COURSE TITLE: Computer Network (Fiber Optic) Cabling

4. UNITS: Two (2)

5. CATALOG COURSE DESCRIPTION -- Provide a description of the course, including an overview of the topics covered:

This job-oriented practical course on fiber-optic cabling imparts essential knowledge and skills to install, test, maintain and troubleshoot fiber-optic cabled systems widely used in high-speed data links and computer networks. Major topics include: Basics of optical fibers and cables, connectors, fused splices and tools used to make patch cables, Premises cabling, safety practices in installing cables that include eye protection, handling hazardous gases and chemicals, testing and troubleshooting installed cable plants that include couplers, repeaters and switches as per the standards developed by the Computer-Technology Industries Association (CompTIA).

6 CLASS SCHEDULE COURSE DESCRIPTION -- Provide a brief description of the course, including an overview of the Course including an overview of the topics covered:

This job-oriented practical course on fiber-optic cabling imparts essential knowledge and skills to install, test, maintain and troubleshoot fiber-optic cabled systems widely used in high-speed data links and computer networks. Major topics include: Basics of optical fibers and cables, connectors, fused splices and tools used to make patch cables, Premises cabling, safety practices in installing cables that include eye protection, handling hazardous gases and chemicals, testing and troubleshooting installed cable plants that include couplers, repeaters and switches as per the standards developed by the Computer-Technology Industries Association (CompTIA).

7. INITIAL COLLEGE COURSE APPROVAL DATE: Spring 2001

OUTLINE APPROVAL DATE: 1/27/09

8. UPDATES, IF EXISTING COURSE: (check all applicable boxes):

- Content Last Update: 1/09
Objectives Last Update: 1/09
College Specific Course Attributes/Data Elements Last Update:
Districtwide Course Attributes/Data Elements Last Update:
Other (describe) Last Update: 1/09

Change in course description

1 Underlined course attributes are the same for the course throughout the LACCD; all other course attributes are college specific.

10. CLASS HOURS:

	"Standard Hours" per Week (based on 18 weeks)	Total Hours per Term (hrs per week x 18)	Units
Lecture:	1	18	1
Lab/activity (w/ homework):			
Lab/activity (w/o homework):	3	54	1
Total:	4	72	2

Note: The Carnegie Rule and Title 5, section 55002 sets forth the following minimum standards: 1 unit = 1 hour lecture per week, 2 hours homework per week; **OR** 2 hours per week of lab with homework; **OR** 3 hours of lab per week without homework. The hours per week are based on a standard 18-week calendar. Lecture also includes discussion and/or demonstration hours, laboratory includes activity and/or studio hours.

11. PREREQUISITES, COREQUISITES, ADVISORIES ON RECOMMENDED PREPARATION, and LIMITATION ON ENROLLMENT

Note: The LACCD's *Policy on Prerequisites, Corequisites and Advisories* requires that the curriculum committee take a separate action verifying that a course's prerequisite, corequisite or advisory is an "appropriate and rational measure of a student's readiness to enter the course or program" and that the prerequisite, corequisite or advisory meets the level of scrutiny delineated in the policy.

. Prerequisites: **None** (If Yes, complete information below)

Subject	Number	Course Title	Units	Validation Approval Date (official use only)

. Corequisite: **None** (If Yes, complete information below)

Subject	Number	Course Title	Units	Validation Approval Date (official use only)

. Advisories: **None** (If Yes, complete information below)

Subject	Number	Course Title	Units	Validation Approval Date (official use only)

12. REPETITIONS -- Number of times course may be repeated for credit (three maximum): (see: Section V, #9) **None**

13. OTHER LIMITATIONS ON ENROLLMENT (see Title 5, Section 58106 and Board Rule 6803 for policy on allowable limitations. Other appropriate statutory or regulatory requirements may also apply):

Thirty; depends on number of work stations available.

Section II: COURSE CONTENT AND OBJECTIVES

1. COURSE CONTENT AND OBJECTIVES:

COURSE CONTENT AND SCOPE – Lecture: If applicable, outline the topics included in the lecture portion of the course (outline reflects course description, all topics covered in class).	Hours per topic	COURSE OBJECTIVES - Lecture (If applicable): Upon successful completion of this course, the student will be able to... (Use action verbs – see Bloom’s Taxonomy below for “action verbs requiring cognitive outcomes.”)
A. Basic Concepts of Fiber optics and Cabling : Optical fiber, types and properties, index of Refraction, fiber applications, performance, and Parameters of fiber-optic measurements	2	1. Sketch a basic fiber-optic system showing all essential elements that include cable, connector and data flow from a sender to a receiver.
B. Fiber Optic Networks and Systems : Telephony, CATV, CCTV, Local-Area Networks, Data Links and Security systems	2	2. Demonstrate an understanding of fiber optic cable usage in the telecom and computer industry through a diagram showing different systems.
C. Identifying and Specifying Fiber Optic Cables : Choice of cable, technical specs and typical values. National Electric Code (NEC), Installation specs and ways to future-proof a cabled system	3	3. Practice identification of different fiber-optic cables, components such as connectors, couplers, hubs, switches, repeaters and patch cables.
D. Fiber Optic cables, Connectors, splices and Tools needed to assemble patch cables: Fiber joints and connectors, stripping, cleaning, and cleaving, fiber-end polishing, terminating cable with connector, making fusion-splice joints, and standards for network cabling	3	4. Formulate cable-connector termination procedures to obtain a working patch cable.
E. Fiber-Optic Hardware for Inside (premises) and Outdoor cabled systems: Premises cabling, outside plant hardware, Trenching for conduits, enclosures for outside Cable plants, tools and test equipment , and Guidelines for overseeing fiber installations	2	5. Examine testing procedures for a patch cable to be able measure transmission and insertion losses.
F. Fiber-optic Installation safety Issues : Bare fiber safety and eye protection, chemicals and hazardous gases, UV light sources, and use of cable-installation tools and equipment	2	6. Relate troubleshooting practices to actual tests and measurements for an understanding of common problems in a fiber-optic system.
G. Fiber-optic cable pulling: Avoiding danger and disaster in cable pulling, Despoiling cable rolls with right pulling force, Avoid bending fiber too tightly and interfering with other installations, and procedures for pulling and holding cable for stripping	2	<p>SLOs: As a result of this learning experience, the student can:</p> <p>1. Draw a block diagram of a cabled system with all the system parts and the data-flow path.</p>
H. Fiber-optic Testing and Troubleshooting:		

Optical (light) power, testing optical fiber, connectors and splices for transmission loss, testing an installed fiber-optic cabled plant, couplers, repeaters, switches and data links for speed and bandwidth, and relating the tests for troubleshooting commonly-occurring problems in fiber-optic systems	2	
Total Lecture hours*	18	

COURSE CONTENT AND SCOPE -- Laboratory : If applicable, outline the topics included in the laboratory portion of the course (<i>outline reflects course description, all topics covered in class</i>).	Hours per Topic	COURSE OBJECTIVES - Laboratory (If applicable): Upon successful completion of this course, the student will be able to... (Use action verbs – see Bloom’s Taxonomy below for “action verbs requiring cognitive outcomes.”) ²
1. Basics of Fiber-optic cable Installation. (examine cable types, properties and specs)	6	1. Apply the lecture part to identify cable types, Connectors, couplers, repeaters, hubs and switches
2. Processes for cable-termination into a Connector (strip fiber, clean, cleave, polish fiber-end, clean connector and prepare for fusion-joint with standard procedures and tools)	8	2. Prepare fiber-optic cable for processing to terminate with a connector
3. Prepare and assemble a patch cable for use in a small WORKGROUP network	8	3. Perform fiber splicing and fusion-connect to obtain a patch cable
4. Practice standard safety procedures in the preparation of fiber-optic cable to terminate with a connector	6	4. Test fiber-optic cable for signal loss as per the industry standards of CompTIA
5. Handling of tools and hardware for cabling inside the premises and outside stripping the optical fiber	6	5. Connect patch cable to a computer and a hub to establish connectivity
6. Prepare cable for stripping and jointing to another fiber-optic cable segment through splicing	6	
7. Testing the patch cable for insertion and reflection Losses, and compare with typical specified values	6	
8. Connect the patch cable to a computer on one side and a hub on the other side to form a workgroup network, and test out the connectivity; use this small system to troubleshoot speed and connectivity problems	8	

² In general “activity” courses or portions of courses are classified “laboratory.”

	Total Lab hours*	54

*Total lecture and laboratory hours (which include the final examination) must equal totals on page 1.

Bloom's Taxonomy

SIMPLE SKILLS <<----->> COMPLEX SKILLS					
			Critical Thinking		
<u>Knowledge</u>	<u>Comprehension</u>	<u>Application</u>	<u>Analysis</u>	<u>Synthesis</u>	<u>Evaluation</u>
define	translate	interpret	distinguish	compose	judge
repeat	restate	apply	analyze	plan	appraise
record	discuss	employ	differentiate	propose	evaluate
list	describe	use	appraise	design	rate
recall	recognize	demonstrate	calculate	formulate	compare
name	explain	dramatize	experiment	arrange	value
relate	express	practice	test	assemble	revise
underline	identify	illustrate	compare	collect	score
	locate	operate	contrast	construct	select
	report	schedule	criticize	create	choose
	review	shop	diagram	set up	assess
	tell	sketch	inspect	organize	estimate
			debate	prepare	measure
			inventory		
			question		
			relate		
			solve		
			examine		
			categorize		

- Course
 Program
 Institutional

(check one box above)

LASC STUDENT LEARNING OUTCOMES MATRIX

Course/Program/Institutional Title: ELECTRN 119, Computer Network (Fiber Optic) Cabling
 Faculty/Staff Participants: Dr. Neil Mantena, Instructor; Nouha Toure, Department Chair

SLO Review, 1.30.09

The student will... (outcome)	As measured by the following method... (assessment strategy)	And, if applicable, scored by the following learning rubric. (provide attachment)	Results are examined to determine if the outcome is achieved. Include planned or actual assessment date. (results & evaluation)	Recommendations to improve teaching and learning. (modifications)
Lecture: Draw a block diagram of a cabled system with all the system parts and the data-flow path.	<p>Summative : embedded in the final exam; students are asked to draw a block diagram which is then compared with a standard diagram. A rubric (next column) will be used for assessment.</p> <p>The SLO is measured on a scale of 1 to 5; Excellent, Very good, good, satisfactory, and Not satisfactory.</p>	<p>EXCELLENT: (5 pts) At least 90% of the cable properties and connections are shown correctly as compared to an industry standard. The structure of the block diagram is very close to the one that was handed out in the class.</p> <p>VERY GOOD: (4 pts) At least 80% of the cable properties and connections are correct, and at least 80% of the labels on the functional blocks are acceptable.</p> <p>GOOD (3 pts): At least 70% of the cable properties and connections are correct, with more than 70% of the functional-block labeling being acceptable</p> <p>ACCEPTABLE (2 pts): At least 60% of the cable properties and connections as well as labels on the functional blocks are correct.</p> <p>UNSATISFACTORY</p>	Spring 2010	

		(1 pt): Less than 60% of the cable properties, connections and labeling of functional blocks are correct.		
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curricommSLOcourseoutlineAddendum, Approved Curriculum Committee, 2/29/08; Approved Academic Senate, 3/11/08

2. REQUIRED TEXTS:

Provide a representative list of textbooks and other required reading; include author, title and date of publication:

Haynes & Rosenberg: Data, Voice and Video Cabling (2ndEd); Thomas-Delaware Learning (2007).

3. SUPPLEMENTARY READINGS:

Reading assignments may include, but are not limited to the following: **N/A**

4. WRITING ASSIGNMENTS:

Title 5, section 55002 requires grades to be “based on demonstrated proficiency in subject matter and the ability to demonstrate that proficiency, at least in part, by means of essays or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.” Writing assignments in this course may include, but are not limited to the following:

To summarize the lab results and answer the questions related to each lab exercise

5. REPRESENTATIVE OUTSIDE ASSIGNMENTS:

Out of class assignments may include, but are not limited to the following:

Create a portfolio out of lab exercises each week. For example, 1. students will be asked to sketch a fiber-optic network showing all the elements and components. 2. They will be asked how to prepare the cable for terminating with a connector to form a patch cable, 3. Students will be asked to diagram a workgroup network where this patch cable will be used to connect to the network, and 4. Students will have the opportunity to test the patch cable for its working properly in the network. These are only a few of the assignments shown as examples.

6. REPRESENTATIVE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

Title 5, section 55002(a) requires that a degree-applicable course have a level of rigor that includes “critical thinking and the understanding and application of concepts determined by the curriculum committee to be at college level”. Critical thinking may include, but is not limited to analysis, synthesis, and evaluation. Provide examples of assignments that demonstrate critical thinking.

Organize and create a course portfolio of all key concepts, each related to a hands- on labs done weekly: examples of this assignment are

1. Concept is “total internal reflection of light within an optical fiber...the related experiment is to bring the cable into the path of a light source and see the light coming through on the other side of the cable even if the cable is bent, or even twisted.
2. Concept is: a connector can be joined to a prepared fiber-optic cable to get a patch cable...relate this to the hands-on lab of going through the process of building a patch cable
- 3 Concept : join a cable segment to another segment of a cable by fusing the splice joint to get a patch cable
4. Concept: test procedure to obtain insertion and reflection losses and relate this to the lab experiment
5. Build a small workgroup network using the patch cables to verify connectivity and troubleshoot any problems of speed, file and folder sharing on the network by actual hands-on exercises

** There are about ten to twelve key concepts and related experiments; the course portfolio will include these **

7. METHODS OF EVALUATION:

Title 5, section 55002 requires graded key concepts to be “based on demonstrated proficiency in subject matter and the ability to demonstrate that proficiency, at least in part, by means of essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.” Methods of evaluation may include, but are not limited to the following (please note that evaluation should measure the outcomes detailed “Course Objectives” at the beginning of Section II):

1. Quizzes
2. Tests
3. Assignments related to concepts and labs
4. Writing assignments
5. Midterm exam
6. Final Exam

8. METHODS OF INSTRUCTION:

Methods of instruction may include, but are not limited to the following:

- Lecture
- Discussion
- Laboratory
- Activity
- Field Experience
- Independent Study
- Other (explain)

Field visits to the IT center at LASC and fiber-optic installations in and around the campus

9. SUPPLIES:

List the supplies the student must provide.

USB Memory stick(1) -512 MB; Folders(16), Binders(2), Notebooks(2) and Lab Book(1).

10. COMPUTER COMPETENCY:

If applicable, explain how computer competency is included in the course.

No knowledge of computer usage is required to enter this course.

11. INFORMATION COMPETENCY:

Information competency is the ability to find, evaluate use, and communicate information in all its various formats. It combines aspects of library literacy, research methods and technological literacy. Information competency includes consideration of the ethical and legal implications and requires the application of both critical thinking and communications skills. If applicable, explain how information competency is included in the course.

The following aspects of computer competency are necessary for success in this course. The student acquires/ evaluates; organizes/ maintains and interprets/ communicates information.

12. DIVERSITY:

If applicable, explain how diversity (e.g., cultural, gender, etc.) is included in the course.

A variety of instructional methodologies are used to serve the needs of a diverse group of students.

13. SCANS COMPETENCIES (required for all courses with vocational TOP Codes; recommended for all courses):

SCANS (**S**ecretary's **C**ommission on **N**ecessary **S**kills) are skills the Department of Labor identified, in consultation with business and industry leaders, which reflect the skills necessary for success in the workplace. Check the appropriate boxes to indicate the areas where students will develop the following skills (please note that all SCANS competencies do not apply to all courses):

RESOURCES

- Managing Time:** Selecting relevant goal-related activities, ranking them in order of importance, allocating time to activities, and understanding, preparing and following schedules.
- Managing Money:** Using or preparing budgets, including making cost and revenue forecasts; keeping detailed records to track budget performance, and making appropriate adjustments.
- Managing Material and Facility Resources:** Acquiring, storing, allocating, and distributing materials, supplies, parts, equipment, space or final products in order to make the best use of them.

INTERPERSONAL

- Participating as Member of a Team:** Working cooperatively with others and contributing to group's efforts with ideas, suggestions and effort.
- Teaching Others New Skills:** Helping others learn needed knowledge and skills.
- Exercising Leadership:** Communicating thoughts, feelings, and ideas to justify a position, encouraging, persuading, convincing or otherwise motivating an individual or group, including responsibly challenging existing procedures, policies or authority.
- Negotiating:** Working toward agreement that may involve exchanging specific resources or resolving divergent interests.
- Working with Cultural Diversity:** Working well with men and women and with people from a variety of ethnic, social, or educational backgrounds.

INFORMATION

- Acquiring and Evaluating Information:** Identifying a need for data, obtaining the data from existing sources or creating them, and evaluating their relevance and accuracy.
- Organizing and Maintaining Information:** Organizing, processing and maintaining written or computerized records and other forms of information in a systematic fashion.
- Interpreting and Communicating Information:** Selecting and analyzing information and communicating the results of others, using oral, written, graphic, pictorial, or multimedia methods.
- Using Computers to Process Information:** Employing computers to acquire, organize, analyze and communicate information.

SYSTEMS

- Understanding Systems:** Knowing how social, organizational and technological systems work and operating effectively with them.
- Monitoring and Correcting Performance:** Distinguishing trends, predicting impacts of actions on system operations, diagnosing deviations in the functioning of a system/organization, and taking necessary steps to correct performance.
- Improving or Designs Systems:** Making suggestions to modify existing systems in order to improve the quality of products or services and developing new or alternative systems.

TECHNOLOGY

- Selecting Technology:** Judging which sets of procedures, tools or machines, including computers and their programs, will produce the desired results.
- Applying Technology to Tasks:** Understanding overall intent and proper procedures for setting up and operating machines, including computers and their reprogramming systems.
- Maintaining and Troubleshooting Equipment:** Preventing, identifying, or solving problems with equipment, including computers and other technologies.

Section III: RELATIONSHIP TO COLLEGE PROGRAMS

1. **THIS COURSE WILL BE AN APPROVED REQUIREMENT FOR AN APPROVED ASSOCIATE DEGREE OR CERTIFICATE PROGRAM:** Yes, it is a part of Network cabling (one of the five courses) certificate program.

- a. If yes, the course will be a **program requirement** portion of the "approved program" listed on the State Chancellor's Inventory of Approved Programs (approved programs can be found on the State Chancellor's Office website at <http://misweb.cccco.edu/esed/webproginv/prod/invmenu.htm>)

Required for Certificate in Network Cabling Technician

NOTE: In order for a course to be approved as a requirement for an associate degree or certificate program, the program must be listed on the State Chancellor's Office *Inventory of Approved Programs* AND the course must be listed in the college catalog as either a requirement or an elective for the program. If course is not part of an approved program at the college adopting the course, it will be considered to be a "stand-alone" course, and is subject to the State Chancellor's approval criteria. The college must complete and submit the Chancellor's Office "APPLICATION FOR APPROVAL OF CREDIT" form. Certain courses are granted "blanket approval" by the State Chancellor's Office and do not require separate approval. See the Chancellor's Office *Program and Course Approval Handbook* for details. LACCD Skills **Certificates are not State approved programs** and are not listed on the Chancellor's Office *Inventory of Approved Programs*.

2. **GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE STATUS:**

- a. Area requested: N/A date:

If applicable, provide an explanation of how the course meets the General Education parameters for one of the five general education areas – *Natural Sciences, Social and Behavioral Sciences, Humanities, Language and Rationality, Health and Physical Education* -- contained in Board Rule 6201.14 -General Education Requirements. http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm

- a. 2nd Area requested: N/A date:

If applicable, provide an explanation of how the course meets General Education parameters for an additional general education area – *Natural Sciences, Social and Behavioral Sciences, Humanities, Language and Rationality, Health and Physical Education* -- contained in Board Rule 6201.14 - General Education Requirements. http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm

Section V: SUPPLEMENTAL COURSE INFORMATION

1. **DEPARTMENT/DIVISION NAME:** Business (Electronics Technology)
2. **DEPARTMENT/DIVISION CODE:** 934
3. **SUBJECT CODE** -- 3 characters, assigned by District Office: **346** (existing subject codes are available on the LACCD web site at <http://www.laccd.edu/curriculum/directory-programs-courses/index.htm> 345
4. **SUBJECT ABBREVIATION** -- 7 characters, assigned by District Office: **ELECTRN**
5. **SPC CODE** -- 3 characters, assigned by District Office:
6. **ABBREVIATION FOR TRANSCRIPTS** -- 20 characters, assigned by District Office: **ELECTRN 119**
7. **DEGREE CREDIT:** Indicate whether the course meet the "standards for approval" for degree credit course set forth in Title 5, section 55002(a)(2), which requires the course to have a degree of intensity, difficulty, and vocabulary that the curriculum committee has determined to be at the college level :
This courses is **Certificate - Applicable**
8. **CREDIT/NO CREDIT GRADING:** No
9. **REPETITIONS** -- Number of times course may be repeated for credit (three maximum): **None**

How does the repetition of this course meet Title 5, section 58161 requirements? A course may be repeatable when, "course content differs each time it is offered, and that the student who repeats it is gaining an expanded educational experience for one of the following reasons: (A) Skills or proficiencies are enhanced by supervised repetition and practice within class periods; or (B) Active participatory experience in individual study or group assignments is the basic means by which learning objectives are obtained."

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10. **PRIOR TO TRANSFERABLE LEVEL** – This course attribute applies to **English, writing, ESL, reading** and **mathematics** courses ONLY. If applicable, indicate how many levels below the transferable level this course should be placed: **Not applicable**
 11. **CREDIT BASIC SKILLS** -- Title 5, section 55502(d) defines basic skills as "courses in reading, writing, computation, and English as a Second Language, which are designated as non-degree credit courses pursuant to Title 5, section 55002(b)." **No** If Yes, course must be non-degree applicable.
 12. **CROSS REFERENCE** -- Is this course listed as equivalent in content to existing College/District courses in another discipline? **No**

If Yes, list courses (documentation of cross-discipline agreement must be provided):

13. **COURSE SPECIFICALLY DESIGNED FOR STUDENTS WITH DISABILITIES** -- Title 5, section 56029 allows a course to be repeatable when continuing success of the students with disabilities is dependent on additional repetitions of a specific class. Is this course designated as an "approved special class" for students with disabilities? **No**

If yes, provide an explanation of how this course meets the requirements of Title 5, section 56029.

14. COOPERATIVE EDUCATION STATUS -- Title 5, section 55252 allows for two types of Cooperative Education: 1) General Work Experience Education -- i.e., supervised employment, which is intended to assist students in acquiring desirable work habits, attitudes and career awareness, which need not be related to the students' educational goals; or 2) Occupational Work Experience Education -- i.e., supervised employment, extending classroom based occupational learning at an on-the-job learning station, which is related to the students' educational or occupational goal. Is this course part of the college's approved cooperative work experience education program? **No**

15. COURSE CLASSIFICATION: **Occupational**

Note: A course's Classification, TOP Code and SAM code must be aligned – e.g., Courses with an "Occupational" Course Classification must have an "Occupational" TOP Code **and** a SAM Code of A, B, C, or D; courses that do not have an "Occupational" Course Classification cannot have an Occupational TOP Code **and** must have an "E" SAM Code. Courses coded as "basic skills" in #11 should be coded "Adult and Secondary Basic Skills."

16. TOP CODE – (6 digits XXXX.XX) 0934.00.

Course content should match discipline description in Taxonomy of Programs found at www.cccco.edu/cccco/esed/curric/curriculum.htm.

17. SAM CODE (Student Accountability Model): "C"

SAM Codes (see CCC Chancellor's Office *Student Accountability Model Operations Manual*, 1984) should be assigned as follows:

Priority "A" – Apprenticeship: Courses designed for an indentured apprentice must have the approval of the State of California, Department of Industrial Relations Department, Division of Apprenticeship Standards.

Priority "B" – Advanced Occupational: Courses taken by students in the advanced stages of their occupational programs. Courses should be offered in one specific occupational area only. Priority letter "B" should be assigned sparingly; in most cases, no more than two courses in any one program should be labeled "B." "B"-level courses must have Priority "C" prerequisites in the same program area.

Priority "C" – Clearly Occupational: Courses generally taken by students in the middle stages of their programs should have a difficulty level sufficient to detract "drop-ins." Courses may be offered in several occupational programs within a broad area. The "C" priority, however, should also be used for courses within a specific program area when the criteria for "B" classification are not met. A "C"-level course should provide the student with entry-level job skills.

Priority "D" – Possibly Occupational: "D" courses are those taken by students in the beginning stages of their occupational programs. The "D" priority can also be used for service (or survey) courses for other occupational programs.

Priority "E" – Non-occupational.

SECTION VI: APPROVAL STATUS

1. APPROVAL STATUS:

- | | | |
|--|----------------------------------|-----------------------|
| a. <input type="checkbox"/> New Course | . Board Approval Date: | . Effective Semester: |
| b. <input type="checkbox"/> Addition of Existing District Course | . College Approval Date: | . Effective Semester: |
| c. <input type="checkbox"/> Course Change* | . College Approval Date: | . Effective Semester: |
| d. <input checked="" type="checkbox"/> Outline Update | . College Approval Date: 1/27/09 | |

* Changes to a course require the completion of a "Course Change Request" form and approval by the college's Curriculum Committee. In some cases districtwide approval is also required; see, Administrative Regulation E-65, section 3(c) for details.

SECTION VII: APPROVAL INFORMATION FOR NEW OR ADDED COURSES

(complete in consultation with Department Chair and the appropriate Academic Administrator)

N/A – Existing Course

1. ORIGINATOR: Neil R Mantena

2. DEPARTMENT: Business (Electronics).

3. IF THIS IS A NEW COURSE, INDICATE HOW THE COLLEGE PLANS TO MEET THE EXPENSE OF THIS COURSE: This is an existing course.

By additional funds. Describe: N/A

By deleting courses from the college catalog and course database. List specific courses to be deleted: N/A

By deleting sections of existing courses. List courses and number of sections to be deleted: N/A

First year: Second year: Third year:

By rotating sections of existing courses. List courses and number of sections to be rotated, as well as the semesters in which they will be offered: N/A

4. IMPACT -- Will this course directly impact other course offerings and/or associate degree or certificate programs on campus?

No (If yes, briefly explain how)

5. METHOD OF SUPPORT -- Indicate how the college plans to support the proposed course:

Additional staff -- List additional staff needed: N/A

Classroom -- List classroom type needed: None

Error! Reference source not found.;SUBJECT (DISCIPLINE) NAME: **Electronics**; COURSE NUMBER: **119**; ACADEMIC YEAR: 2008-2009

Equipment -- List new equipment needed and indicate funding source for any new equipment: None

Supplies- List supplies and indicate dollar value: \$1,000 every year

Library/Learning Resources- The course initiator shall consult with the College Librarian and review the college library, book, periodical, and electronic resource collections relevant to this course. List additional titles and resources to be considered for purchase as funding permits:

**LOS ANGELES COMMUNITY COLLEGE DISTRICT
COURSE STANDARDS AND CRITERIA**

Subject: **ELECTRN** Number: **119** Course Title: **Computer Network (Fiber Optic) Cabling**

Using the Official Course Outline, please determine whether or not the above listed credit course meets the following standards and criteria required in Title V, Part VI of the California Administrative Code, and which has been designated as appropriate to the Associate Degree. Place a (X) in the appropriate box.

<u>CRITERIA AND STANDARDS</u> Section 55002	<u>RATING CRITERION</u>	
	MET	NOT MET
Is recommended by the responsible college officials, and the academic senate or other appropriate faculty body as meeting the requirements of this subsection and has been approved by the local district governing board as a course meeting the needs of the students for admission.	x	
Is taught by a credentialed instructor in the discipline.	x	
Is offered as described <u>in an outline in official college files</u> . That the outline shall specify the unit value, scope, objectives, content in terms of a specific body of knowledge, appropriate reading and writing assignments, outside of class assignments, instructional methodology and methods of evaluation for determining whether the stated objectives have been met by students.	x	
Is taught in accordance with a set of instructional objectives common to all students.	x	
Provides for measurement of students performance in terms of the stated course objectives and culminates in a formal recorded grade based upon uniform standards in accordance with Section 55578 of Title 5, which is permanently recorded as an evaluation of student performance; bases grades on demonstrated proficiency in subject matter determined by multiple measurement for evaluation; and has examinations, including essays and/or, where appropriate, uses appropriate symbol systems and/or skills demonstrations by students.	x	
Grants units of credit based upon a specified relationship between the number of lecture and/or laboratory hours or performance criteria specified in the course outline; and requires a minimum of three hours of work per week including class time for each unit of credit, prorated for short-term, lab and activity courses.	x	
Treats subject matter with a scope and intensity which requires students to study independently outside of class time.	x	
Requires, when appropriate, entrance skills and consequent prerequisites for the course before students are enrolled	x	
Requires the ability to think critically and to understand and apply concepts in order to participate in the course.	x	
Requires learning skills and a vocabulary appropriate for a college course.	x	
Requires the use of college level educational materials.	x	

Title5Assurances

CERTIFICATION AND RECOMMENDATION

This course meets Title 5 requirements for Associate Degree applicable college credit towards an Associate of Arts Degree.

This course meets Title 5 requirements but does not satisfy the requirements for an Associate Degree applicable course .

We certify that the information and answers above properly represent this course.

Nouha Toure for Neil Mantena

Originator

12/10/2008

Date

Nouha Toure

Department/Cluster Chairperson

01/26/2009

Date

Linda Larson Singer

Articulation Officer

01/30/2009

Date

Shelley Werts

Librarian

02/02/2009

Date

Elmer Bug

Dean (if applicable)

02/03/2009

Date

Linda Larson Singer

Curriculum Committee Chairperson

01/27/2009

Date

Alfred Reed

Academic Senate President

02/02/2009

Date

Leige Henderson

Vice President, Academic Affairs

02/04/2009

Date