



Section 1. Proposed Course Outline (A general statement of course content that informs class syllabus construction. Once approved, all sections of a given course must include this content, no matter which instructor teaches the course, or the mode of delivery. Divisions must include this new course outline in the Divisional Course Outline binder as required by COPPs.)

Course Number: **CS233P** Full Course Title for print catalog: **Intermediate Programming: Python**

Abbreviated Course Title for Banner: **Intermediate Programming: PYTHON** (30 character limit)

Prerequisites: CS 133P

Co-requisites:

Grade Option: ☒ Graded (with P/NP option) ☐ Pass/No Pass only

Number/Type Credits	Term Minimum Contact	Term Maximum Contact	11-Week Term Contact
<u>2</u> Lecture	<u>20</u> hours (lecture credits x 10)	<u>24</u> hours (lecture credits x 12)	<u>22</u> hours (lecture credits x 11)
<u>1</u> Lec/Lab	<u>20</u> hours (lec-lab credits x 20)	<u>24</u> hours (lec-lab credits x 24)	<u>22</u> hours (lec-lab credits x 22)
<u>1</u> Lab	<u>30</u> hours (lab credits x 30)	<u>36</u> hours (lab credits x 36)	<u>33</u> hours (lab credits x 33)
<u>4</u> Total credits (sum)	<u>70</u> Total hours (sum)	<u>84</u> Total hours (sum)	<u>77</u> Total hours (sum)

Course Description (1000 character limit):

The course introduces intermediate level programming concepts and skills and PYTHON syntax language and allows students to develop object oriented, data driven applications.

Course Outcomes and Proficiencies

What will the student **know** or **be able to do** at the end of the course?

What **attitudes** related to the subject will the student hold?

Upon successful completion of this course, the student will:

Design, implement, test and debug systems of classes in PYTHON.

Design, implement, test and debug intermediate level object oriented programs in PYTHON.

Design, implement, test and debug multi-form applications in PYTHON

Design, implement, test and debug data driven applications in PYTHON.

Describe programming concepts, themes and issues orally and in writing.

Assessments Planned

What evidence will demonstrate that students have achieved course outcomes? (assessment tools may include departmental tests, written products, portfolios, juried performances, quizzes and exams, or alternative assessments such as qualitative studies, capstone projects, external reviewers, etc.)

How each outcome will be assessed:

Hands on activities. Small group activities. Quizzes.

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Course Content by Major Topics

What topics will be presented? What are the main activities of the course? What are the central themes?
(See sample at <http://www.lanecc.edu/cops/format3.htm>.)

Topics:

Review of concepts and skills from CS 133P

Introduction to Object Oriented Programming In PYTHON

More complex classes

- Inheritance

- Polymorphism, Interfaces and Operator Overloading

- Exception Handling

More complex user interfaces and event driven programs in PYTHON

- Graphical User Interfaces

- Mobile Applications

Data driven applications

- Files and streams

- Databases

Section 2. Proposal Information

Course Developer:

Mari Good

Date: 1/4/2010

Catalog year to take effect:

2010-11

Type of Proposal

☒ New course

☐ Currently 199 or 299

☐ Experimental Course

☐ 199 Special Studies

☐ 299 Trends

☐ Revised course (If increasing credits, use credit change form)

☐ Reactivated course with no change

☐ Reactivated course with changes

Type of Course:

☐ Lower Division Collegiate (transfer)

☒ Professional/Technical (required or elective)

☐ Developmental, numbered below 100

Rationale:

How does this proposal further the goals of the program or department?

This course is the second in a sequence of courses that provide GIS, Energy Management and Networking students with an introduction to programming in Python. It supports the departmental intention to update the content of the Network degree. It also supports the departmental development of courses that provide CS/CIS content to other degree programs as a service.

What assessment evidence supports this proposal?

Discussions with CIT advisory committee members and employers in the community indicate a need for a systems programming strand in the Network degree.

How do you know there is a demand for this course?

The course is required in the Computer Network Operations degree. It is one of the programming courses that can be used by students in the Computer Information Science degree. It is an appropriate elective for students in the Gaming and Programming degrees.

Section 3. Curriculum Equity (<http://www.lanec.edu/cops/curric.htm>)

To promote an environment where all learners are encouraged to develop their full potential, this course will support Lane's Curriculum Equity policy in the following way(s):

Computer related fields are, in general, white male dominated. The CIT department attempts to counteract the gender inequity by co-sponsoring a monthly professional meeting, Women in Information Technology, with the Women's Center. Every attempt is made to teach individual courses in a way that encourages all students.

Section 4. For revised courses only: PREVIOUS Catalog/Course Information:

Course Number: _____ Course Title in Banner: _____ (30 characters maximum)

Full Course Title in print catalog:

Prerequisites:

Co-requisites:

Grade Option: ☐ Graded (with P/NP option) ☐ Pass/No Pass only

Number/Type Credits	Term Minimum Contact	Term Maximum Contact	11-Week Term Contact
___ Lecture	___ hours (lecture credits x 10)	___ hours (lecture credits x 12)	___ hours (lecture credits x 11)
___ Lec/Lab	___ hours (lec-lab credits x 20)	___ hours (lec-lab credits x 24)	___ hours (lec-lab credits x 22)
___ Lab	___ hours (lab credits x 30)	___ hours (lab credits x 36)	___ hours (lab credits x 33)
___ Total credits (sum)	___ Total hours (sum)	___ Total hours (sum)	___ Total hours (sum)

Course Description:

What will change? ☐ Course Number ☐ Title ☐ Course Description ☐ Credit hours ☐ Contact hours

Section 5. Support Courses (New Professional/Technical course proposals must complete.)

Professional/Technical courses are tracked within programs for purposes of Carl Perkins funding and budgetary planning. Indicate all degree or certificate programs for which this course will be required.

Program	Division
Networking	CIT

Section 6. Overlap Courses (New course proposals must complete.)

While overlap of course materials is not necessarily a flaw, duplication of course materials may lead to inefficient use of college resources. If there is overlap, the faculty of overlapping courses must agree on the extent of overlap and attach a rationale explaining its necessity.

Indicate all departments/courses that this course may overlap. Division Dean of existing course enters one of three options at right. Note: N/A is not an option.

Options:

1. Approved: course does not overlap.
2. Approved: overlap is acceptable. Rationale attached.
3. Disapproved: reasons attached.

Division	Course Number / Title	% Overlap	Option	Division Dean of existing course (Signature required for all options)	Date
none					

Section 7. Qualification to fulfill degree requirements (complete all relevant forms, available at <http://www.lanec.edu/currshed/drrcforms.htm>, and send to Mary Brau for the Degree Requirements Review Committee):

☐ Form(s) applying for the following degree requirement status have been attached. (Only check this box when forms have been completed and attached.)

AAOT, ASOT-Bus, OTM:

- ☐ Arts & Letters
- ☐ Social Sciences
- ☐ Science / Mathematics / Computer Science

AAOT:

- ☐ Ethnic/Gender/Cultural Diversity

AAS, 1-year and 2-year certificates:

- ☐ Human Relations

Section 8. Library Impact Statement

Under accreditation standards, Library consultation is essential for new programs, new courses and for substantively revised courses when the revisions entail any change in library use.

What assignments will require the use of library and information resources?

This course involved numerous lab activities in which students access the internet and other information resources to supplement the text for the course.

Each academic area has a Liaison Librarian (<http://www.lanec.edu/library/services/liaison.htm>). Contact the designated librarian to discuss the library needs of your course. Please allow the librarian at least one week to assess library resources.

To be completed by Liaison Librarian:

- ☐ Library resources are adequate to support this proposal.
☐ Additional resources are needed but can be obtained from current funds.
☐ Significant additional Library funds/resources are required to support this proposal.

Liaison Librarian

Date

Section 9. Divisional Approval (To be completed by Division Chair and Administrative Assistant)

Human, Physical, and Financial Resources:

- ☐ Additional instructional costs (staff, materials, services or facilities) will be incurred to offer this course.
Source of funding:

- ☐ No additional instructional resources (staff, materials, services or facilities) are needed to offer this course.

Explain:

Required Certifications:

- ☐ We have developed minimum course certification standards according to the COPPs procedure "Instructor Qualifications: Credit," to be filed with OISS upon course approval.
☐ We have completed faculty certification form(s) for faculty qualified to teach this course, to be filed with OISS and Human Resources upon course approval.

Fees:

- ☐ We have completed fee rationale and fee request forms to be submitted to OISS upon course approval, in compliance with the COPPs procedure, "Fees: Special"
☐ No special fees will be required for this course.

Divisional Recommendation:

- ☐ The Division Chair and Administrative Assistant have reviewed this course proposal and kept a copy for divisional files.
☐ Faculty review of this course was completed within the division on ____ (date).

- ☐ Pass ☐ Do Not Pass

Administrative Assistant/Coordinator

Date

Division Dean

Date

Section 10. College Approval

Curriculum Committee Chair

Date

Executive Dean

Date

Curriculum Approval

Committee hearing:

Date

Vice President, Academic Affairs, Chief Academic Officer

Date