Department of Electrical and Computer Engineering
University of Puerto Rico
Mayagüez Campus

ICOM 4036 – Structure and Properties of Programming Languages

Prontuario - Fall 2009

IMPORTANT NOTE

Read this prontuario as soon as you get it and read it carefully! It contains the "rules of the game". Avoid unexpected surprises when it is too late to do anything about them. Ignorance of the rules is no excuse for breaking them.

1. Faculty & Staff

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Office Hours: Tuesday-Thursday 1:00-3:30 PM or by email appointment

2. Course Description

Comparative study of programming paradigms including imperative, object-oriented, functional, logic, and concurrent programming with focus on main features produced by different languages for specific applications. Formal specification of the syntactic structure of a language, context-free grammars, parsing, and principles of language design.

You will find a detailed course outline in an accompanying handout.

3. Pre-requisites

ICOM 4035 – Data Structures

4. Lectures

Tuesday/Thursday 3:30-4:45 PM, S-206

5. Course Credits

3 credits

6. Course Web Site

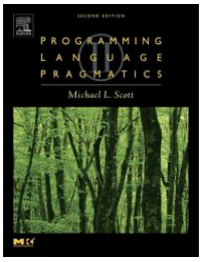
The course will have a website holding many useful resources to help your throughout the course. We try to make an effort to keep the site updated, but will invariably make mistakes and forget to update materials once in a while. PLEASE LET US KNOW ABOUT ANY PROBLEMS WITH THE WEBSITE AS SOON AS YOU DETECT THEM. We tend to get a fair amount of general criticism for not keeping the site up to date, but we seldom get an email notifying a broken or stale link. HELP US HELP YOU.

URL: http://www.ece.uprm.edu/~bvelez/courses/Fall2009/icom4036/icom4036.htm

7. Email

Every student is required to have an email account accessible from the UPRM Web Portal. Email will be an essential means of communication between students and staff during the term. **Students and staff will be assumed to have received email within 24 working hours, not including weekends.**

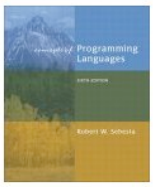
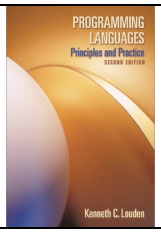
8. Textbook & References



Programming Language Pragmatics
by Michael L. Scott

- **Paperback:** 912 pages
- **Publisher:** Morgan Kaufmann; 2 edition
- (November 7, 2005)
- **ISBN:** 0126339511

The following is a list of reference books in which some of the material discussed in class can be found:

	**Concepts of Programming Languages (6th Edition)** by Robert W. Sebesta • **Hardcover:** 704 pages ; Dimensions (in inches): 1.16 x 9.62 x 7.30 • **Publisher:** Pearson Addison Wesley; 6 edition (July 24, 2003) • **ISBN:** 0321193628
	**Programming Languages Principles and Practice** by Kenneth C. Louden **Hardcover:** 650 pages ; Dimensions (in inches): 1.25 x 9.75 x 6.75 **Publisher:** PWS Publishing Co.; 2nd edition (July 15, 2002) **ISBN:** 0534953417
	**Programming Languages Concepts and Constructs** by Ravi Sethi, Tom Stone (Editor) **Hardcover:** 624 pages ; Dimensions (in inches): 1.22 x 9.53 x 7.70 **Publisher:** Addison-Wesley Pub Co; 2nd edition (February 1996) **ISBN:** 0201590654
	**Programming Languages Principles and Paradigms** by Allen B. Tucker, Robert E. Noonan, Robert Noonan **Hardcover:** 432 pages ; Dimensions (in inches): 1.25 x 9.25 x 7.50 **Publisher:** McGraw-Hill Science/Engineering/Math; (October 30, 2001) **ISBN:** 0072381116

An additional set of programming language references and manuals will be posted on the course website.

9. Office Hours

The professor will hold weekly office hours (see section 1 above). This is an excellent opportunity to go over the material discussed in class on a one on one basis and at an individual pace. Unfortunately, many students who may greatly benefit from it, seldom visit the professor before their doubts have accumulated to the point where it becomes very hard to keep up with the course. We commonly get student complains near the end of the semester about the difficulty of some concepts and their inability to keep up with the course. Such complaints seldom come from students who have frequently attended office hours. If you do not understand a concept discussed in class please use this important resource. Bring your questions and remember that the dumbest question is the one that is never asked. IT IS MY JOB AND GOAL TO HELP YOU MASTER THE COURSE SUBJECTS. That's what I get paid for ☺

10. Course Evaluation

Your grade will be based **exclusively** on the scores that you obtain in the class problem sets, programming assignments, partial exams and a final exam. Each such piece of work will be graded on a scale of 0-100. The weights assigned to each of these categories are as follows:

Evaluation Categories	**Percentage Weight**
Problem Sets and Programming Assignments	**20%**
Partial Exams (3)	**42% (14% each)**
Final Exam	**38%**

Your total score will be calculated as a weighted average of your average scores in each category. Each individual problem set and exam will carry the same weight within its corresponding category. Your grade will be determined by a standard curve as follows:

Grade	Interval
A	[90, 100]
B	[80, 90)
C	[70, 80)
D or F	[0, 70)

EXTREMELY IMPORTANT!
In order to pass the course you must turn in all your problem sets and programming assignments and attend all exams.

Students are expected to provide the best possible solution to problem set and exam questions in order to get full credit. We will not only evaluate **correctness**; we will evaluate **quality** as well.

Students will have ten (10) working days after their graded work is returned to them to make any claims about incorrect grading of problem sets or exams. No further claims will be considered after this time.

11. Problem Sets and Programming Assignments

Problem sets and programming assignments are homework assignments intended to allow the students the opportunity to expand on or practice the material discussed in class. The assignments may include exercises of diverse nature including: calculations, analysis and programming. Each problem set will carry the same relative weight. The number or problem

sets and programming assignments will be determined through the semester, but will not be mode than one every two weeks (8 total).

As an experiment, this semester we are letting students work on problem sets and assignments in groups of at most two students. Each student in a group is responsible for mastering all the issues covered by the problem set or programming assignment and not just a part or a section that they worked on at hand. Each student should be equally capable of answering any questions about the entire work that may appear in exams.

You may turn in a problem set or programming assignment late, but you must always submit it to pass the class even if it accumulates no points towards your total score. A percentage of the score will be deducted for your score for late submissions as follows:

Days Late	Percent Deduction
1 day late	25%
2 days late	50%
3 days late	100%

Problem sets and programming assignments will be graded for both correctness and quality according to the following weights:

Criteria	Weight (%)
Correctness	60%
Design	20%
Efficiency	10%
Style & Documentation	10%

All problem sets will be submitted electronically. You will receive instructions for electronic submission of problem sets with each problem set. Also new to this semester, we MAY grade some of the programming assignments trough fifteen minute interviews will the each group of students (a.k.a. happy hours). Each group of students will register in advance for an interview that should occur during the week following the submission deadline.

We will distribute more detailed rules on allowed types of collaboration and cheating in future handouts.

12. Partial Exams

We will have three 75 minute partial exams in class. Each exam will cover material up to and including the material covered before the date of the exam. However, emphasis will be placed on the material discussed but not tested by previous exams.

The exams will be administered during the class time period and at dates to be announced during the first few weeks of the term, but never later than two weeks before the exam; this to allow for sufficient time for students to plan their studying. Once the dates of the exams are announced,

they will not be subject to change. You are responsible for planning ahead of time. Having other exams the same day is no excuse for changing the dates.

Attending partial exams is a requirement of this course and missing an exam will be reason enough to fail the course, unless an arrangement can be worked out with the professor at least 24 working hours before the actual date of the exam.

In some cases and under the discretion of the professor, the exam scores may be normalized to compensate for an unexpected degree of difficulty as demonstrated by student scores.

Students must work individually on all exams. You will find more on this below under academic integrity.

13. Final Exam

A comprehensive final exam will be administered at the time and date determined by the UPRM Registrar. The exam carries a weight of 38% towards your final score. The registrar usually announces the date for the exam several weeks in advance.

14. Students with Disabilities

If you believe that your are at a disadvantage against other students due to a physical or mental difficulty, please contact the professor individually and immediately so that some reasonable accommodation can be made to attempt to circumvent or ameliorate the difficulty. It is not only our desire and duty but it is also your right as established by the 1990 Americans with Dissabilities Act. Learn about your rights and demand them.

15. Academic Integrity

El artículo 10 del Reglamento General de Estudiantes de la Universidad de Puerto Rico contiene 15 puntos que se consideran "infracciones de las normas esenciales al orden y a la convivencia universitaria y acarrean sanciones disciplinarias." He aquí uno de los puntos.

> *La obtención de notas o grados académicos valiéndose de falsas y fraudulentas simulaciones, o haciéndose pasar por otra persona, o mediante treta o engaño, o copiando total o parcialmente la labor académica de otro estudiante, o copiando total o parcialmente las respuestas de otro estudiante a las preguntas de un examen, o haciendo o consiguiendo que otro tome en su nombre cualquier prueba o examen oral o escrito.*

Violaciones a estos puntos pueden conllevar algunas de las siguientes sanciones:

1. *Amonestación*
2. *Probatoria por un tiempo definido durante el cual otra violación de cualquier norma tendrá consecuencia de suspensión o separación*
3. *Suspensión de la Universidad por un tiempo definido. La violación de los términos de la suspensión conllevará un aumento del período de suspensión o la separación definitiva de la Universidad.*
4. *Separación definitiva de la Universidad.*

El estudiante que viole este reglamento obtendrá F en la clase y su caso podrá ser llevado ante la junta de disciplina del Recinto. Evítese este mal rato, o aténgase a las consecuencias.

Si usted está teniendo problemas para completar algún trabajo, consulte al profesor a tiempo durante sus horas de oficina o solicitando una cita. Obtener información total o parcial del Internet para completar sus trabajos sin la debida autorización constituye una violación a las reglas de integridad académicas arriba descritas.