

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

## **INEL 4206 - Microprocessors Course Information Sheet**

### **1 Faculty & Staff**

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**Office Hours:** MWF 11:30 AM-12:30 PM and Monday 1:30 PM-4:30 PM

We will have no TA's during this term.

### **2 Course Description**

Architecture, organization and operation of microprocessors and their supporting devices; design of microprocessor-based systems.

### **3 Pre-requisites**

**INEL 4201 – Electronics I**

**INEL 4205 – Digital Circuits**

### **4 Lecture Times and Place**

Section 091 - Monday, Wednesday, Friday, 9:30 AM – 10:20 AM, S-204

Section 101 - Monday, Wednesday, Friday, 10:30 AM – 11:20 AM, S-204

### **5 Course Credits**

3 credits






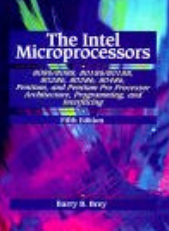
### **6 Course Web Site**

<http://www.ece.uprm.edu/~bvelez/courses/Spring2002/INEL4206/inel4206.htm>

## 7 Textbook

There is no required textbook for the class.

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

	<p><b>Computation Structures (MIT Electrical Engineering and Computer Science)</b>          by <a href="#">Stephen A. Ward</a>, <a href="#">Robert H. Halstead</a>  <b>Hardcover</b> - 811 pages (December 13, 1989)          MIT Press; ISBN: 0262231395 ; Dimensions (in inches): 1.84 x 10.36 x 8.39</p>
	<p><b>Computer Organization and Design : The Hardware/Software Interface</b>          by <a href="#">David A. Patterson</a>, <a href="#">John L. Hennessy</a>  <b>Hardcover</b> - 993 pages 2nd edition (September 1997)          Morgan Kaufmann Publishers; ISBN: 1558604286 ; Dimensions (in inches): 1.94 x 9.57 x 7.69</p>
	<p><b>Introduction to Computing Systems : From Bits and Gates to C and Beyond</b>          by <a href="#">Yale N. Patt</a>  <b>Hardcover</b> Bk&amp;Cd-Rom edition (September 2000)          McGraw Hill College Div; ISBN: 0072440392</p>
	<p><b>Structured Computer Organization</b>          by <a href="#">Andrew S. Tanenbaum</a> (Preface)  <b>Paperback</b> - 669 pages 4 edition (October 23, 1998)          Prentice Hall; ISBN: 0130959901 ; Dimensions (in inches): 1.21 x 9.55 x 7.25</p>
	<p><b>Computer Organization</b>          by <a href="#">V. Carl Hamacher</a>  <b>Hardcover</b> - 832 pages 5th edition (August 2, 2001)          McGraw-Hill Higher Education; ISBN: 0072320869 ; Dimensions (in inches): 1.41 x 9.46 x 7.62</p>
	<p><b>Intel Microprocessors 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium, and Pentium Pro Processor: Architecture, Programming, and Interfacing</b>          by <a href="#">Brey, Barry B.</a>, <a href="#">Barry B. Brey</a>  <b>Hardcover</b> - 966 pages 5 edition (June 11, 1999)          Prentice Hall; ISBN: 0139954082 ; Dimensions (in inches): 1.66 x 10.35 x 8.34</p>

If you are interested in buying one of these books fell free to ask the instructor for advice.

## 8 Email

Every student is required to have an email account accessible from the Internet. Email will be an important means of communication between students and staff during the term. Students and staff will be assumed to have received email within 48 hours, not including weekends. Both students and staff may make use of the following email lists:

List Name	Usage
inel4206-professor	Professors
inel4206-students	Students in both sections
inel4206-091	Students in section 091
inel4206-101	Students in section 101
inel4206-forum	Students plus professor

You may not use the class mailing lists for personal matters not related to this course. Inadequate use of email may violate institutional policy on Internet and information technology use and may trigger disciplinary action. Please observe the rules on [netiquette](#).

## 9 Course Evaluation

Your grade will be based **exclusively** on the scores that you obtain in the class problem sets, partial exams and final exam. The weights assigned to each of these categories are as follows:

Evaluation Instrument	Percentage Weight
Problem Sets	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 your ranking among all the students taking the class in both sections. The mean and standard deviation of all total scores will be calculated from which your grade will be computed approximately as follows:

Grade	Relation to the mean
A	More than 1 standard deviation above mean
B	On or above mean by less than 1 standard deviation
C	Below mean by less than 1 standard deviation
D or F	More than 1 standard deviation below mean

The mean and standard deviation will be computed only based on those students who have completed all problem sets and exams. **Not completing a problem set or exam will constitute sufficient reason for failing the course.**

Students are expected to provide the best possible answer to problem set and exams questions in order to get full credit. We not only evaluate correctness but we will emphasize quality as well.

## 10 Problem Sets

Problem sets 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. Although we encourage student collaboration it is a requirement of this course that each student writes the answer to each problem set individually.

You may turn in a problem set late, but you must always submit your problem sets 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%

As for exams, problem sets will be grade for both correctness and quality according to the following relative weights:

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

All problem sets will be submitted electronically. You will receive instructions for electronic submission of problem sets with each problem set.

## 11 Partial Exams

We will have three (time permitting) partial exams. 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 out of class at dates and times 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.

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 hours before the date of the exam. Students must work individually on all exams. More on this ahead...

## 12 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%.

## 13 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 acarrear 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 será llevado ante la junta de disciplina del Recinto. Evítese este mal rato, o aténgase a las consecuencias.