

## EENG 406: Introduction to Integrated Circuits – Syllabus – Spring 2020

### Lectures:

T, R 1:50 PM – 3:05 PM, PAC 005 (and HRK 100 to access the CAD tools)

### Office Hours:

T, R 3:15 PM - 5:15 PM, HRK 215

Feel free to walk-in anytime or to make an appointment

### Instructor:

Claudio Talarico

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### Course Description

Structural design of digital integrated circuits in MOS technology; layout, design rules, fabrication techniques; use of computer automated design and simulation tools, and high-level description language.

### Recommended Textbooks

*CMOS VLSI Design: A Circuits and Systems Perspective*, by N.E. Weste and D. Harris, Addison Wesley, 4/e, 2011

*CMOS Circuit Design, Layout, and Simulation*, by R. Jacob Baker, Wiley-IEEE, 4/e, 2019

### Grading Policy

| Letter | Percentage |
|--------|------------|
| A      | 100-94     |
| A-     | 93-90      |
| B+     | 89-86      |
| B      | 85-82      |
| B-     | 81-78      |
| C+     | 77-74      |
| C      | 73-70      |
| C-     | 69-66      |
| D+     | 65-62      |
| D      | 61-58      |
| F      | 57-0       |

### Course Grading:

Homework:

20% (lowest score will be dropped)

Midterm:

20%

Project:

40%

Final:

20%

*No Late work will be accepted.*

*No make-up exams.*

Classroom Etiquette:

- Arrive in class on time
- Turn off cell phones
- No distracting conversations -- relevant questions are strongly encouraged

EENG 406 Main Learning Outcomes

- demonstrate knowledge of MOS devices and integrated circuit design.
- demonstrate knowledge of IC design techniques.
- demonstrate knowledge of IC design software and methods.
- demonstrate ability to utilize commercial computer software to design and simulate integrated circuits.

Important Dates:

- Tuesday, Jan. 14 – Instruction Begins
- Monday, Jan. 20 – Martin Luther King, Jr. Holiday
- Monday, Feb. 17 – President’s Day Holiday
- **Thursday, Feb. 20 – Midterm Exam**
- Monday, Mar. 9 – Friday, Mar. 13 – Spring Vacation
- Thursday, Apr. 2 – Midterm Exam
- Friday, Apr. 10 – Good Friday Holiday
- Monday, Apr. 13 – Easter Holiday
- **Thursday, May 7 – Final Exam (10:30 am – 12:30 pm; PAC 005)**

## ADDENDA TO THE SYLLABUS

### A NOTE ON HARASSMENT, NON - DISCRIMINATION AND SEXUAL MISCONDUCT:

Consistent with its mission, Gonzaga seeks to assure that all community members learn and work in a welcoming and inclusive environment. Title VII, Title IX and Gonzaga's policy prohibit gender-based harassment, discrimination and sexual misconduct. Gonzaga encourages anyone experiencing gender-based harassment, discrimination or sexual misconduct to talk to someone from the Campus and Local Resources list found in the [Gonzaga's Harassment and Non-Discrimination Policy](#).

It may be helpful to talk about what happened in order to get the support needed and for Gonzaga to respond appropriately. There are options for support and resolution, namely confidential [support resources](#), and campus reporting and support options are available. Gonzaga will respond to all reports of sexual misconduct in order to stop the harassment, discrimination, or misconduct; prevent its reoccurrence; and address its effects. Responses may vary from support service referrals to formal investigations.

As a faculty member, I want to get you connected to the resources here on campus specially trained in and experienced in assisting in such complaints, and therefore I will report all incidents of gender-based harassment, discrimination and sexual misconduct to Title IX. A representative from that office will reach out to you via phone and/or email to explore options for support, safety measures and reporting. I will provide our Title IX Director with all relevant details, including names and identifying information, of the information reported. For more information about policies and resources or reporting options, please visit the following websites: [Equity and Inclusion](#) and [Title IX](#). If you would like to make a report of harassment, discrimination or sexual misconduct directly, you may:

- Contact the Title IX Director by phone, email, or in person

Stephanie N. Thomas, Title IX Director 509-313-6910

[whaleys@gonzaga.edu](mailto:whaleys@gonzaga.edu)

Business Services Building, 018

- Or complete an online form: [Sexual Misconduct Report Form](#)

### NOTICE TO STUDENTS WITH DISABILITIES/MEDICAL CONDITIONS:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability/medical condition requiring an accommodation, please call or visit the [Disability Access Office](#) (second floor of Foley Center Library, Room 208.)

### CLASS ATTENDANCE:

I follow Gonzaga's standard policy on absences: the maximum allowable absence is two class hours (100 minutes) for each class credit. For three-credit classes, the maximum absence is, therefore, six class hours (300 minutes). The grade for excessive absences is "V," which has the same effect as "F" **(Fail) and is counted in the GPA.**

### ACADEMIC INTEGRITY

All members of the Gonzaga community are expected to adhere to principles of honesty and integrity in their academic endeavors. You are expected to be familiar with the [University's Academic Integrity Policy](#) and the potential sanctions for violating it. I will abide strictly by this policy's procedures and guidelines. Ignorance of the policy will not serve as a defense against any violations.

### RELIGIOUS ACCOMMODATIONS FOR STUDENTS

In compliance with Washington State law (RCW 28.10.039), it is the policy of Gonzaga University to reasonably accommodate students who, due to the observance of religious holidays, expect to be absent or endure a significant hardship during certain days of their academic course or program. [The Policy on Religious Accommodations for Students](#) describes procedures for students requesting a Religious Accommodation and for faculty responding to such a request.

### COURSE EVALUATION:

At Gonzaga, we take teaching seriously, and we ask our students to evaluate their courses and instructors so that we can provide the best possible learning experience. In that spirit, we ask students to give us feedback on their classroom experience near the end of the semester. I will ask you to take a few minutes then to carry out course/instructor evaluation on-line. Please know that I appreciate your participation in this process. This is a vital part of our efforts at Gonzaga to improve continually our teaching, our academic programs, and our entire educational effort.