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| Kennesaw State University | |
| DEPARTMENT OF COMPUTER SCIENCE | |
| Summer 2016 | |
| **CS 6020 Advanced Computer Architecture**  **(TTH 5pm-7:45pm)** | |
| **Dr. Jacob** | |
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| Course Description: | This graduate course reviews computer architecture fundamentals before introducing more advanced topics. The content will be balanced between computer architecture and organization. A re**s**earch project/paper is to be developed during the second half of the course |
| Prerequisites: | Coursework in computer architecture and operating systems OR CS6020 |
| Textbook and Resources: | Linda Null and Julia Lobur, **The Essentials of Computer Organization and Architecture** 4th Edition |
| Professor: | Dr. Jacob |
| **Office:** | Atrium Building J-151 (Marietta Campus) |
| **Email Address:** | [fjacob1 at kennesaw.edu](mailto:vclincy%20at%20kennesaw.edu) |
| **Phone:** | 470-578-4440 |
| **Office Hours:** | **Regular Office Hours:** by appointment |
| **Course Time & Location:** | TTH 5pm-9:45pm, Atrium Building 151 |

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| **Tentative Course Schedule: Subject to Change** | | | | | |  |
| Wk | **Dates (TTH)** | **Activity** | | | |  |
| **1** | June 1 | Introduction | | | |  |
| **2** | June 6 | Lecture 1, Lecture 2 (Basics) | | | |  |
| **3** | June 8 | Lecture 3, Lecture 4 (Logic gates and MARIE, Assignment 1) | | | |  |
| **4** | June 13 | Lecture 4, (ISA, Project introduction) | | | |  |
| **5** | June 15 | Exam 1- topics till Lecture 4, Assignment 1 due | | | |  |
| **6** | June 20 | Lecture 5, Memory | | | |  |
| **7** | June 22 | Lecture 6, System software, Project update | | | |  |
| **8** | June 27 | Lecture 7, Alternative architectures | | | |  |
| **9** | June 29 | Lecture 8, Embedded systems. | | | |  |
| **10** | June 29 | Lecture 9, Performance measurement | | | |  |
| **11** | July 4 | No class | | | |  |
| **12** | July 6 | Exam 2- topics from Lecture 5-9 | | | |  |
| **13** | July 11 | Lecture 10, Network architecture, Assignment 2 | | | |  |
| **14** | July 13 | Lecture 11, Selected topics (TBD) | | | |  |
| **15** | July 18 | Project update, Assignment 2 due | | | |  |
| **16** | July 20 | Final exam preparation | | | |  |
| **17** | July 25 | Final exam | | | |  |
| **18** | July 27 | Project due | | | |  |
| Assessment: | |  | | Grade Evaluation: | |  |
| **Exam 1**  *– 1.25 hours* | | | 20% | **A** | 90% - 100% |  |
| **Exam 2**  *– 1.25 hours* | | | 20% | **B** | 80% - 89% |  |
| **Assignment 1** | | | 10% | **C** | 70% - 79% |  |
| **Assignment 2** | | | 10% | **D** | 60% - 69% |  |
| **Project** | | | 20% | **F** | 59% or below |  |
| **Final Exam** | | | 20% |  |  |  |
| **General Policies and Expectations:** | | | | | | | |
| Attendance at all classes is highly encouraged. Concepts and ideas discussed in one class are used as building blocks for more concepts and ideas in the next class. In being successful in this subject matter, a good rule-of-thumb is to study at least 3 hours per one hour of lecture. Any class sessions missed by the student are the student's responsibility to make up, not the Professor's. Makeup exams will NOT be given; instead, the last exam will count in place of one missed exam. No makeups for the projects. Students are expected to read the text and any other supporting documentation the Professor distributes. If the student requires additional materials to read or additional problems to solve in better understanding the topics and concepts, the Professor expects the student to take the initiative in locating additional materials or problems. The Professor expects students to take advantage of office hours when needing clarification or help. Late projects will be docked 10%/day. The Professor greatly supports students sending emails at any time – it will be the goal of the Professor to reply to emails within a 24-hour time span. Refer to course intro (power point slides) regarding the policy around how the class participation grade is assigned and how the grades are determined for exams. Exams should be returned to the Professor in class right after the review for the student to receive a grade. Grades are not logged until the students have reviewed the exams for grading mistakes. If students take the exam from the classroom, a grading penalty of 50% will be used due to the fact the Professor has no real way of determining if the exam was tampered with or not. | | | | | | | |
| Only those students who are enrolled in the class may attend lectures, receive assignments, take quizzes and exams, and receive a grade in the class. If a student is administratively withdrawn from this course, they will not be permitted to attend class nor will they receive any grade for the class. | | | | | | | |
| Academic Integrity Statement: | | | | | | | |
| Every KSU student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs. Section II of the Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the University Judiciary Program, which includes either an "informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimum one semester suspension requirement.  The provisions of the STUDENT CONDUCT REGULATIONS II regarding Academic Honesty in the KSU Undergraduate and Graduate catalogs will be strictly enforced in this class.  It is the student’s responsibility to ensure they fully understand to what extent they may collaborate or discuss content with other students. No exam work may be performed with the assistance of others or outside material unless specifically instructed as permissible. If an exam or assignment is designated “no outside assistance” this includes, but is not limited to, peers, books, publications, the Internet and the WWW. If a student is instructed to provide citations for sources, proper use of citation support is expected. Additional information can be found at the following locations.  [**http://www.apa.org/journals/webref.html**](http://www.apa.org/journals/webref.html)  [**http://www.lib.duke.edu/libguide/citing.htm**](http://www.lib.duke.edu/libguide/citing.htm)  [**http://bailiwick.lib.uiowa.edu/journalism/cite.html**](http://bailiwick.lib.uiowa.edu/journalism/cite.html)  [**http://www.cas.usf.edu/english/walker/papers/copyright/ipdummie.html**](http://www.cas.usf.edu/english/walker/papers/copyright/ipdummie.html) | | | | | | | |

**Acknowledgement and Acceptance of Academic Honest Statement**

In any academic community, certain standards and ethical behavior are required to ensure the unhindered pursuit of knowledge and the free exchange of ideas. Academic honesty means that you respect the right of other individuals to express their views and opinions, and that you, as a student, not engage in plagiarism, cheating, illegal access, misuse or destruction of college property, or falsification of college records or academic work.

As a member of the Kennesaw State University academic community you are expected to adhere to these ethical standards. You are expected to read, understand and follow the code of conduct as outlined in the KSU graduate and undergraduate catalogs. You need to be aware that if you are found guilty of violating these standards you will be subject to certain penalties as outlined in the college judiciary procedures. These penalties include permanent expulsion from KSU.

Read the Academic Honesty Statement and then sign and date in the space below. You are required to abide by these ethical standards while you are a student at KSU. Your signature indicates that you understand the ethical standards expected of you in this academic community, and that you understand the consequences of violating these standards.

**CS6020 (Section\_\_\_\_) \_\_\_\_\_ \_\_\_ Dr. Jacob\_\_\_\_\_\_\_\_\_** \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Course Name Professors Names

**Print Name Student ID Number**

**Signature Date**

(Please fill-out, sign and turn-in this page to the Professor at the beginning of the semester – the Professor will not issue grades until this page is received from the student)