**IE5300-001:** RFID Systems in Supply Chain

Summer 2014

**Instructor(s):** Dr. Erick C. Jones

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**Office Hours: Monday/ Tuesday 3 – 5 pm**

**Section Information:** IE 5300-001

**Time and Place of Class Meetings:**  MTWR 1:00 – 3:00pm, WH 402

**Description of Course Content** This course covers the foundations of Radio Frequency Identification Systems. Including the fundamentals of how RFID components of tag, transponder and antennae are utilized to create RFID systems. This course also includes best practices for implementation RFID systems in common supply chain operations.

**Student Learning Outcomes:** Upon completion of this course the student is expected to have demonstrated his/her ability to know and properly use:

1. The general problem solving process
2. The basic concepts of RFID systems
3. The integration of RFID in Supply Chain Management, Logistics, and Manufacturing
4. The practical on hand teaching of using the RFID tags and antennae’s
5. The current mandates, research developments, and job opportunities in RFID

**Requirements: Exams may include multiple choice, short answer, and quantitative analysis type questions. No makeup exams will be allowed without prior authorization. Homework assignments will be given throughout the course. No late assignments will be accepted. At least one research paper expected in the journal will be required from the students. Quizzes will be given throughout the course. No makeup quizzes will be allowed without prior authorization.**

**Required Textbooks and Other Course Materials:**

Jones, E. C, Gray, B., Okate, S., and Armstrong H.; Tracked: What You Should Know About Invisible Monitoring and Security.  Houston, TX, PWD Group Press 2014 (ISBN 978-0-9777081-2-3).

**Additional text**

Jones, E. C, and Chung, C. A., RFID in Logistics, Boca Raton FL, CRC Press 2008. (ISBN 0-8493-8526-1).

**Grading Policy**: All work will be done individually unless otherwise specified. The grading policy is expected to be as follows.

Exams 30%

Homework 10%

Project/Research Paper 30%

Quizzes 10%

Final Exam 20%

Total 100%

**Attendance Policy:** Attendance for this class is required. Notice will need to be provided If you need to miss a class.

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. Contact the Financial Aid Office for more information.

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Academic Integrity:** It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. According to the UT System Regents’ Rule 50101, §2.2, "Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts."

**Student Support Services Available**:The University of Texas at Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at 817-272-6107 or visit [www.uta.edu/resources](http://www.uta.edu/resources) for more information.

**Electronic Communication Policy:** The University of Texas at Arlington has adopted the University “MavMail” address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. ***Students are responsible for checking their MavMail regularly.*** Information about activating and using MavMail is available at <http://www.uta.edu/oit/email/>. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington.

To obtain your NetID or for logon assistance, visit <https://webapps.uta.edu/oit/selfservice/>. If you are unable to resolve your issue from the Self-Service website, contact the Helpdesk at helpdesk@uta.edu.

**Descriptions of major assignments and examinations with due dates:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Week** | **Topic** | **Text** |
| **06/02** | **1** | **Understand RFID**  **Introduction** | **1** |
| **06/03** | **RFID History** | **2** |
| **06/04** | **RFID Basics** | **2** |
| **06/05** | **Quiz** |  |
| **06/09** | **2** | **Passive RFID** | **3** |
| **06/10** | **Active RFID** | **4** |
| **06/11** | **Design of RFID Systems** | **5** |
| **06/12** | **Exam 1** |  |
| **06/16** | **3** | **RFID: Mandates and Standards** | **6, 7** |
| **06/17** | **RFID: Mandates and Standards** | **6, 7** |
| **06/18** | **RFID System Design** | **5** |
| **06/19** | **Quiz** |  |
| **06/23** | **4** | **RFID and logistics** | **8** |
| **06/24** | **Inventory Control** | **8** |
| **06/25** | **Economics of RFID system** | **13** |
| **06/26** | **Exam 2** |  |
| **06/30** | **5** | **Project** |  |
| **07/01** | **Project** |  |
| **07/02** | **Review Project** |  |
| **07/03** | **Certification review/ Pre-quiz** |  |
| **07/07** |  | **Final Exam** |  |