

Dates	Corresponding Week	Topic	Reading Material 1	Reading Material 2	Additional Reading Material	Writing Assignment Due Date	Writing Assignment Points	Lab Due Date	Lab Points	Exam Points			
August 20	Week 1	1. Overview of Cyber Security 2.Operating System Security Fundamentals	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 24	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	Anderson, R. J. (2010). Security engineering: a guide to building dependable distributed systems. John Wiley & Sons. chapter 1						Writing Assignments	28	
August 27	Week 2	1. Access Controls - definitions and principles 2. Access Controls - threats 3. Access Controls - types of acces control 4. Access Controls - access control models 5. Access Controls - monitor and management 6. NIST 800-57 Controls	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 24	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	Anderson, R. J. (2010). Security engineering: a guide to building dependable distributed systems. John Wiley & Sons. chapter 4	Write up on the fundamentals of cyber security	2				Labs	30	
September 3	Week 3	Labor Day - No Classes	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 24	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	Security and Privacy Controls for Federal Information Systems and Organizations. Available at https://csrc.nist.gov/publications/detail/sp/800-53/rev-4/final	Write up on access controls	2		5		Exams	42	
September 10	Week 4	Setting up a database environment	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 24	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	1. Databases for beginners. Available at http://zcht.home.amu.edu.pl/piki/Databases%20for%20beginners.pdf 2. How to Mitigate the Most Significant Database Vulnerabilities. Available at http://schell.com/Top_Ten_Database_Threats.pdf			Setting Up the world Database - Available at https://downloads.mysql.com/docs/world-setup-en.pdf	5		Total	100	
September 17	Week 5	Securing a database environment	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 24	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	Bertino, E., & Sandhu, R. (2005). Database security-concepts, approaches, and challenges. IEEE Transactions on Dependable and secure computing, 2(1), 2-19. Available at https://www.cerias.purdue.edu/assets/pdf/bibtex_archive/2005-99.ps								
September 24	Week 6	1. Enterprise database architecture 2. Distributed systems	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 2	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	Anderson, R. J. (2010). Security engineering: a guide to building dependable distributed systems. John Wiley & Sons. chapter 6			Secure a database environment with applied controls	5				
October 1	Week 7	1. Discussion on database assignment in Ethiopia with Catholic Relief Services	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 2	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	Dawson provide information for CRS project assignment.	Write up on multilevel security [Only graduate students]	2						
October 8	Week 8	Fall Break Day - No Classes	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 3	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).		Write on database architecture [Only graduate students]	2	Create report from finding from SQL injection	5				
October 15	Week 9	Midterm	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 24	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).						10			
October 22	Week 10	1. Database Encryption and Masking 2. Watermarking	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 24	Ross, R. S. (2013). Security and Privy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	Shmueli, E., Vaisenberg, R., Elovici, Y., & Glezer, C. (2010). Database encryption: an overview of contemporary challenges and design considerations. ACM SIGMOD Record, 38(3), 29-34. Available at http://www09.sigmod.org/sigmod/record/issues/0909/p29_surveys.shmueli.pdf								
October 29	Week 11	1. SQL injection 2. cyber analytics for database content	Elmasri, R., & Navathe, S. (2010). Fundamentals of database systems. Addison-Wesley Publishing Company. chapter 4-5	Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).	Halfond, W. G., Viegas, J., & Orso, A. (2006, March). A classification of SQL-injection attacks and countermeasures. In Proceedings of the IEEE International Symposium on Secure Software Engineering (Vol. 1, pp. 13-15). IEEE. Available at https://www.cc.gatech.edu/fac/Alex.Orso/papers/halfond_viegas.orso.ISSSE06.pdf								
November 5	Week 12	Group project and presentation start		Ross, R. S. (2013). Security and Privacy Controls for Federal Information Systems and Organizations [includes updates as of 5/7/13] (No. Special Publication (NIST SP)-800-53 Rev 4).				SQLmap ran against database and report write up	10				

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