

MSIS 5213: Information Assurance Management Spring Semester 2018

ACTION: one week prior to course start date, go to the Spears School of Business Online Learning website to choose a testing center at:

[spearsonline.okstate.edu](https://stwcas.okstate.edu/cas/login?service=https%3A%2F%2Fspearsonline.okstate.edu%2Ffullcalendar%2Fadmin)<<https://stwcas.okstate.edu/cas/login?service=https%3A%2F%2Fspearsonline.okstate.edu%2Ffullcalendar%2Fadmin>>, and click on "Select Testing Center" at the top right of the page. Follow the instructions to identify your testing center. Up to one week before each exam start date, make your appointment directly with your testing center to take each exam while being monitored by a proctor for test security reasons. The exam and/or exam instructions will be sent to your testing center 3 days prior to the exam start date. To confirm your testing center received the exam/exam information, call at least one day prior to your appointment time. If the center does not have your exam, contact the Spears School Online Learning office immediately at spearsonline@okstate.edu<<mailto:spearsonline@okstate.edu>>, or call (405) 744-4048 to request the exam to be sent. Contact that same office if you have any questions regarding the testing center sign up process. You may also visit <http://spears.okstate.edu/online/guide>.

This online course has the following technical requirements:

- A broadband internet connection
- Windows 7 or Mac OS Mavericks or newer operating system are preferred
- [Google Chrome](#) or [Mozilla Firefox](#) web browser
Note: lecture videos are **not** compatible with Internet Explorer or Edge.
- [VLC Viewer](#) video player

Sections:

MSIS 5213.27521

Instructor: Dr. Jim Burkman

E-mail: jim.burkman@okstate.edu

Homepage: online.okstate.edu

Office: GAB 311C (that's the "old" business building, mid-semester I'll move to BUS 306 and that will be in the new business building)

Office hours: By appointment

Phone: 744-5142

Club: <http://isac.okstate.edu>

Textbooks: *None*

Study aids: Anki Flashcards <http://ankisrs.net/>. You may not distribute my flash cards to anyone or post them in any format on any website. You may use ankiweb.net to store and sync my cards for your use across your devices but you MAY NOT MAKE THEM SHAREABLE IN ANKIWEB. It is against their EULA, as they deem inappropriate desk that are "only useful to a small group of people (such as lecture notes for a specific class". You also are not the IP holder and I am explicitly NOT granting you a license, as the actual IP holder, to share this material.

Discussion Forum: There is a discussion forum on Brightspace where you can share information, ask questions, etc. I'll be hanging out there as well.

The OSU Spring Syllabus Attachment includes important dates, information, and resources to HELP YOU SUCCEED and is available on the course Brightspace site.

Course Site: (Brightspace by D2L): <http://online.okstate.edu> or <http://my.okstate.edu> (choose Online Classroom after logging in)

Online Learning Support: spearsonline@okstate.edu

Phone: 405-744-4048

Facebook: Follow Spears School Online Learning on

Facebook! <http://www.facebook.com/SpearsOnline/>

Course Description: Information Assurance (IA) is the cornerstone of business security and has become recognized as a critical element of national security. This class is the first within the OSU MSIS Department's IA curriculum and is designed to familiarize you with the basics of IA management.

The course material is organized into four themes: Encryption, Computer, Network, Social. Each theme consists of multiple modules. One module will be covered each lecture and one exam will be administered for each theme.

Course content will be delivered primarily through lectures, and augmented with assigned reading and videos intended for consumption prior to class. Flashcards and preparatory quizzes for each module will be provided to help with retention of terms and concepts. Exams will require students to further identify the terms and concepts in relevant contexts.

Be sure to check the Brightspace site often. This syllabus and the Brightspace site for this class will likely change in response to the progress of this class. The policies and schedule in this syllabus are subject to change at my discretion, upon notice in any form to the class. You are responsible for getting any downloads offered for upcoming classes from Brightspace. Handouts, assignments, slides, due dates, and other information will be posted on Brightspace.

Learning Goals and Course Objectives:***Ethical Decision Making***

Upon completion of this course the student should be able to:

Identify the ethical issues of various forms and degrees of hacking

Identify the ethical responsibilities of Information Assurance professionals

Identify the different roles of law enforcement, politics, court decisions, corporate influence and consumer attitudes surrounding issues of intellectual property rights

Business Knowledge and Competency

Upon completion of this course the student should be able to:

Demonstrate a basic knowledge of the vocabulary, processes, environment and practices of the IA function in the context of the business environment.

Recognize interrelationships between the MIS security function and the other core business disciplines.

Recognize and appreciate the global differences and similarities in the application of IA in the differing legal and cultural environments worldwide.

Technological Competence

Upon completion of this course the student should be able to:

Recognize, discuss and evaluate a variety of core MIS technical skills including (but not limited to): hardware, software and network configurations; basics of application development; end-user involvement and requirements; open vs closed source software; selecting and building computers.

Recognize, discuss and evaluate a variety of core Information Assurance skills including (but not limited to): symmetric and asymmetric encryption; social engineering; steganography; program and o/s security; authentication; network attacks and controls; the administration, risk management and economics of cyber security; legal and ethical issues of information assurance.

Attendance: Attendance is at your whim, given that this is an online course. I do suggest staying on top of the lectures and prep quizzes as there is a lot of material and playing catch-up might be very difficult. The exams and homework are based on my lectures, my slides, any outside videos or material that I may ask you to read/watch.

Participation: Class participation is an integral part of the class. It includes not only your ability to read assigned class materials also your ability to scan the environment and contribute scholarly information that you find. Feel free to email me your thoughts and questions and/or share them on the forums! Also, please stay up on current information security events.

Class Conduct: In the course forums and all correspondence please always keep your comments civil. No trolling, no passive-aggressive snarking.

Graduate Grading:

Exam 1	20%
Exam 2	20%
Exam 3	20%
Exam 4	20%
Paper	20%

A course grade of 90% or better will result in a letter grade of A, 80-89% B, 70-79% C, 60-69% D, <60% F. **NOTE!** I reserve the right to uniformly move the class average up at the end of the semester. For example, if the course average is 70%, I will not move it to 68%, but I may move it to 72%. This is not a curving process, as all individual scores would move the same amount.

Exams: There will be four exams delivered through Brightspace. The exams will be closed book/notes. They may include a combination of multiple choice, short answer, essay questions, and pictorial representations. Exams may cover all readings, lectures, and all materials presented in class and assigned outside of class. The exam windows are:

Exam 1	February 13 th and 14 th
Exam 2	March 13 th and 14 th
Exam 3	April 12 th and 13 th
Exam 4	May 7 th , 8 th or 9 th

Paper: The paper requirement is a 15 page (minimum) argumentative thesis related to Information Assurance. The thesis statement must be submitted to Brightspace by the date of Exam 1 along with one or more additional stakeholder viewpoints clearly stated. Current news articles or journal papers must be briefly summarized, referenced and submitted by the date of Exam 2, with at least two being provided for each stakeholder viewpoint. Additional references

will be expected in the paper but this will give me an insight as to your progress. Failure to submit these on time means that you won't get any feedback from me.

The paper is due at midnight, CST on the Monday of pre-finals week. Late papers will have 1% deducted for every hour (or fractional hour) after that deadline. Example: a paper 17 hours and 4 minutes late will have a score of $(100 - 18 - [\text{any normal graded deductions}])$.

I strongly suggest using the services of the OSU Writing Center for both the thesis and the main body of the paper if you wish to do well on this project (<http://osuwritingcenter.okstate.edu/>). Telling me that you've never written a thesis statement and paper before is no excuse for poor work.

Additional details for the thesis paper are included at the end of this syllabus.

Prep Quizzes: Each module will have a prep quiz provided on Brightspace consisting of various types of questions designed to help you with the terms and concepts for that module. You will be able to take each prep quiz as many times as you want and the correct answers will be given at the end of the quiz. Exam questions will not be in the same format as prep quizzes (typically exams will be multiple choice) and they will place the terms and concepts in context. This means that, while the flash cards and prep quizzes are designed to help you with the memorization part, the exams will still require you to demonstrate contextual knowledge of those terms and concepts.

Extra Credit: Extra credit is generally not provided in this class for graduate students.

Software: Since you are enrolled in an MSIS class you will have access to our MSDNAA license and our VMWare license. You should receive an email with information about this opportunity. Go to Login, click on the "I forgot my password", and provide your Okey email as your login name. Your password will be mailed to you. Note that this can take a few days to get set up at the start of the semester. If you'd like to learn how to virtualize Windows on your Mac using this free software let me know and I'll help!

Instructor Response: You should hear back from me within the hour for most emails. If for some reason you've not gotten a response with 24 hours please email me again. That's a rare oversight on my part. Remember, emailing me is the fastest way to get my attention! Grades for exams will appear on Brightspace right after you take the exam.

Make-up Policy: Students are expected to take each exam on the dates given. Please contact me as quickly as possible if there is going to be a conflict.

Drop Policy: Information about university drop policy and dates is at: <http://registrar.okstate.edu/> Click on "class schedules," and "short courses" To drop this course, contact the Registrar's office, (405) 744-6876, or drop through Banner Service.

Academic Conduct: Oklahoma State University is committed to the maintenance of the highest standards of integrity and ethical conduct of its members. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and fraudulently altering academic records) will result in your being sanctioned. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript (F!), and being suspended from the University. You have the right to appeal the charge. Contact the Office of Academic Affairs, 101 Whitehurst, 405-744-5627, academicintegrity.okstate.edu.

Plagiarism on any part of the term paper, including the thesis statement and the associated current event article(s) will earn an F! academic integrity sanction. Submitting your paper to Turnitin.com or a similar plagiarism detection system prior to the completion of my grading will earn a zero for the paper.

Disabled Students: According to the ADA, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need classroom accommodations, contact the office of Student Disability Services (SU 315). Please advise the instructor of your disability as soon as possible, to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability from SDS but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified. For more information about OSU Student Disability Services, please go to: <http://sds.okstate.edu> or call 405-744-7116 v/t.

Course Topics (Subject to Change)		
Week 1	Jan 16	Mod 0 - Course Overview
	Jan 18	Mod 1 - Information Assurance Overview
Week 2	Jan 23	Mod 2 - Basic Encryption
	Jan 25	Mod 3 - Advanced Symmetric Encryption and Hashing
Week 3	Jan 30	Mod 4 - Asymmetric Encryption and Digital Signatures
	Feb 1	Mod 5 - Public Key Infrastructure (PKI) and TLS_SSL
Week 4	Feb 6	Mod 6 - Steganography
	Feb 8	Mod 7 - Quantum Computing/Quantum Keys
Week 5	Feb 13/14	Exam 1
	Feb 15	Mod 8 - Computer Basics
Week 6	Feb 20	Mod 9 - Hacking Exemplar
	Feb 22	Mod 10 - Program Development and Attack
Week 7	Feb 27	Mod 11 - Authentication
	Mar 1	Mod 12 - Open Source Software
Week 8	Mar 6	Mod 13 - Memory Protection and Access Control
	Mar 8	Mod 14 - Trustworthy Systems
Week 9	Mar 13/14	Exam 2
	Mar 15	Mod 15 - Network Concepts
Week 10	Mar 20	Spring Break
	Mar 22	Spring Break
Week 11	Mar 27	Mod 16 - Network and Web Attacks
	Mar 29	Mod 17 - Network and Web Controls
Week 12	Apr 3	Mod 18 - Vulnerability Assessments
	Apr 5	Mod 19 - Digital Forensics
Week 13	Apr 10	Mod 20 - Social Engineering
	Apr 12/13	Exam 3
Week 14	Apr 17	Mod 21 - Intellectual Property
	Apr 19	Mod 22 - Cybercrime Laws
Week 15	Apr 24	Mod 23 - Regulatory Compliance
	Apr 26	Mod 24 - Security Administration
Week 16	May 1	Mod 25 - Security Risk and Economics
	May 3	Mod 26 - PC Parts and Self-Builds

Graduate Paper Requirements – MSIS 5213

Graduate Student Deliverables: Graduate students enrolled in the MSIS 5213 class are required to write a term paper for this course. Papers must use 12 point Calibri font, one inch margins all around, double line spacing with no additional spacing between lines. Papers must follow exactly the APA style covered here: <https://owl.english.purdue.edu/owl/resource/560/18/>. An example is available on that page and also here: <https://goo.gl/PD1KPK>. Note that you won't have the sections "Literature Review" and "Discussion" but rather you'll have the three main sections discussed here, as well as your title page, abstract, conclusion, references and appendices.

After the initial title and abstract pages the next 15 pages (as an absolute minimum) must include only text (exclusive of appendices and the References list). Any papers falling short will have their final grade adjusted by a percentage of work done (9 of 15 pages written would get your final paper grade * (9/15)). No more than 10% of this text can be direct quotes from another source (or said another way, 90% of the text is your own original content). All images, graphs, etc. must be included afterwards in appendices. The first page after the abstract must include your thesis statement.

This paper is not a "tell me about some technology" paper. You are going to present a thesis statement that takes a position on a particular topic where multiple valid positions exist. This is an *argumentative thesis*. I expect you to google the term "argumentative thesis" and read the first few articles to understand how to write an argumentative thesis statement.

A topic that doesn't have at least two reasonable defensible, opposing positions is not an adequate topic.

You will then illustrate the topic with one or more current events and explain both the current event and the problem domain. Then you will analyze the situation, illustrating the different viewpoints and pointing out the strengths and weaknesses of each. Finally you will give a thoughtful, informed resolution or solution to the topic. The paper will include:

1. A paragraph that includes your thesis statement and sets up the tone of your paper. In this section you will also use one or more current news events to illustrate all sides of the problem domain (at least two sides). These events could involve confidentiality (wikileaks, private information, etc), hacking (phone hacks, web page defacement, internet fraud), availability (DDOS attacks, natural disasters), privacy, legal, etc. You are also welcome to cover an event within your workplace. Your discussion should directly point to a security or privacy element that was/wasn't/should have been/shouldn't be an integral part of the problem/solution that is central to the event.

For a non-IA example: I might make an argumentative thesis statement taking the position that legalizing marijuana will increase state revenue that can be used to increase educational spending. “Legalizing marijuana in the state of Oklahoma will increase state revenue and relieve market pressures on the state universities to raise frequently raise tuition.” There are a few sides here: folk who believe legalizing and taxing marijuana will raise income, folks who think that income gain will be more than offset due to increased healthcare costs, DWIs, etc., people who agree it would raise money but that the money wouldn’t actually be used for education, etc. I would pick some current news articles to illustrate one or more of these opposing viewpoints in addition to the viewpoint expressed in my thesis statement.

2. This second section is your analysis of the situation that you presented in section 1. You should discuss all sides (all viewpoints) of the situation. Your evaluation of what is good/bad right/wrong strong/weak about each viewpoint is important here. You cannot just share your opinions, but rather back your statements up with outside citations and examples. Try to be factual and impartial here. You are not suggesting a resolution in this section.
3. This last section is your answer or resolution or solution. You presented the situation in the first part, dissected and weighed the varying viewpoints in the second part, and now you are ready to convince your audience that you have the answer by defending one of those viewpoints with a strong argument backed by cited research. You are defending your thesis statement here.
4. Each of these three sections should be about the same length.

I expect graduate-level work in a professional deliverable. The specific goals for this paper are: an argumentative thesis statement illustrated with or more current events, a rich discussion of the event and the relevant details (technology, people, legal, etc), a section analyzing the pros/cons of all viewpoints with relevant citations, and a resolution section where you successfully argue in defense of your thesis statement. Any papers not meeting these fundamental goals will receive a zero.

The papers will be submitted to Turnitin by me at the end of the semester, and no significant amount of plagiarism is acceptable. If you unsure of what constitutes plagiarism meet with me for clarification. **Plagiarism on any part of the paper, including the thesis statement and the associated current event article(s) will earn an F! academic integrity sanction. Submitting your paper to Turnitin.com or a similar plagiarism detection system prior to the completion of my grading will earn a zero for the paper.**

Proper citations must be included in a bibliography at the end of the paper. You may use any standard format for the bibliography, such as APA. The paper must be submitted to the appropriate D2L dropbox in Word (docx) format. I will not grade any other format.

I strongly suggest using the services of the OSU Writing Center for both the thesis and the main body of the paper if you wish to do well on this project (<http://osuwritingcenter.okstate.edu/>). Telling me that you've never written a thesis statement and paper before is no excuse for poor work. My expectation is that graduates students are prepared to write an argumentative thesis paper and I will not be teaching that skill in this class.

Grading Rubric:

The paper is graded on 18 points that are then scaled to the 20% course grade contribution. For example, scoring 15/18 yields 83.33% on the paper. That, multiplied by 20% yields 16.67% toward your overall course grade (out of a possible 20%).

Paper:

Thesis Statement 3 pts This must meet the requirements stated in the syllabus and graduate paper instructions.

Writing style (includes spelling and grammar) 3 pts Use the Writing Center if you need help with grammar. I have the same expectations, and apply the same standards, for all my students regardless of their national origin.

Format and Presentation (including any visual elements) 3 pts I will take off 1 point if my formatting directions are not followed. Additional points may be lost for poor presentation, the complete lack of visual elements in the appendices, etc.

Each of the three main sections must meet the requirements above. Remember, you are taking a position on some topic, illustrating the topic with a current example, analyzing the topic within that context from all angles, then revealing your supported resolution/solution. You must show evidence of critical thinking skills and creativity. Papers that just report on some technology or a current event will receive no points in these three sections:

Discussion section 3 pts

Analysis section 3 pts

Resolution section 3 pts

Each three point element is graded just like a survey question. 0 if that element is missing or fails to meet the stated requirements. 1 if that element is complete yet has significant flaws or omissions. 2 if that element is good but short, lacking a graduate-level effort, or has multiple

small errors or omissions, 3 if that element is done according to the requirements, complete, graduate-level work that is largely free from errors.

Keep in mind that while your thesis statement should be an assertion: "German Shepherds dogs are dangerous because they are easily distracted." Your paper must argue two or more sides prior to your personal defense of one of those viewpoints. Using a topical example I might write a thesis statement like:

"The single-payer model is the only acceptable solution to the American health care crisis because it eliminates market segregation and provides a better audit trail."

In my paper, then, I would explain the American health care crisis in objective detail. Then I'd use my current news events to illustrate and explain the side of folks who believe that the single payer model would not eliminate market segregation". I'd also use my current news events to illustrate and explain another stakeholder viewpoint. Maybe one that argues against the "better audit trail" portion, or maybe one that argues that market segregation and audit trails are not the problems, but that X and Y are". I'm also going to use current new events to illustrate and explain the viewpoint in my thesis statement but NOT include any of my own analysis.

All that would be part 1 (the Discussion section) of my paper.

Then I'd want to analyze each of these stakeholder arguments using logical, rationality and additional relevant citations. This is part 2 (the Analysis section) of my paper.

The third and final part of my paper is my persuasion piece intended to use the information in part 2 plus additional reasoning and citations to get the reader to fully buy into my thesis position. This part is also conclusionary in that I'll summarize and compare the points made in part 2. This is my Resolution section.

So make sure that your thesis statement and approach is going to get you all these things. This is the only path your paper may take. Please re-read this document so that there are no surprises.