American Public University System

The Ultimate Advantage is an Educated Mind

School of Science and Technology
Department of Information Technology
ISSC361: IT Security: Information Assurance
3 Credit Hours
8 Week Course
Prerequisite(s):None

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Instructor Information

Instructor: (Biography)

Email: Phone: Office hours:

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Course Description (Catalog)

ISSC361 Information Assurance

Comprehensive and accessible, Elementary Information Security covers the entire range of topics required for US government courseware certification NSTISSI 4011 and urges students to analyze a variety of security problems while gaining experience with basic tools of the trade. The text emphasizes both the technical and non-technical aspects of information security and uses practical examples and real-world assessment tools.

Early chapters in the text discuss individual computers and small LANS, while later chapters deal with distributed site security and the Internet. Cryptographic topics follow the same progression, starting on a single computer and evolving to Internet-level connectivity. Mathematical concepts throughout the text are defined and tutorials with mathematical tools are provided to ensure students grasp the information at hand. Rather than emphasizing memorization, this text challenges students to learn how to analyze a variety of security problems and gain experience with the basic tools of this growing trade.

Each chapter includes worked examples of techniques students will need to be successful in the course. For instance, there will be numerous examples of how to calculate the number of attempts needed to crack secret information in particular formats; PINs, passwords and encryption keys.

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Course Scope

Introducing Technology

If we want a solid understanding of security technology, we must look closely at the strengths and weaknesses of underlying information technology itself. This requires a background in computer architecture, operating systems, and computer networking. It's hard for a typical college student to achieve breadth and depth in these subjects and still have time to really study security.

Instead of leaving a gap in students' understanding, this book provides introductions to essential technical topics. Chapter 2 explains the basics of computer operation and instruction execution. This prepares students for a description of process separation and protection, which illustrates the essential role of operating systems in enforcing security.

Chapter 5 introduces file systems and input/output in modern operating systems. This lays a foundation for forensic file system analysis. It also shows students how a modern operating system organizes a complex service. This sets the stage for Chapter 10's introduction to computer networking and protocol software.

Introducing Continuous Process Improvement

The text organizes security problem-solving around a six-phase security process. Chapter 1 introduces the process as a way of structuring information about a security event, and presents a simple approach to risk analysis. Chapter 2 introduces security policies as a way to state security objectives, and security controls as a way to implement a policy. Subsequent chapters introduce system monitoring and incident response as ways to assess system security and improve it. Each step in the process builds on earlier steps. Each step also provides a chance to assess how well our work addresses our security needs. This is the essence of continuous process improvement.

In order to give students an accurate view of process improvement, the text introduces document structures that provide cross references between different steps of the process. We use elements of each earlier phase to construct information in the following phase, and we often provide a link back to earlier data to ensure complete coverage. While this may seem like nit-picking in some cases, it allows mastery of essential forms of communication in the technical and professional world.

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Course Objectives

The goal of this course is to introduce college students to information security. Security often involves social and organizational skills as well as technical understanding. To solve practical security problems, we must balance real-world risks and rewards against the cost and bother of available security techniques. The text uses continuous process improvement to integrate these elements.

Security is a broad field. Some students may excel in the technical aspects, while others may shine in the more social or process-oriented aspects. Many successful students fall between these poles. The text offers opportunities for all types of students to excel.

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Course Delivery Method

This B.A. in Information Systems Security course delivered via distance learning will enable students to complete academic work in a flexible manner, completely online. Resources and access to an online learning management system will be made available to each student. **Online assignments are due by the last day of each week.** Assigned faculty will support the students throughout this eight-week course.

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Resources

Required Text

Richard E. Smith, PhD, Elementary Information Security, Jones & Bartlett Learning, November, 2011.

ISBN-13: 9781449648206 ISBN-10: 0763761419

Evaluation Procedures

The grading will be based on eight graded assignments, eight weekly Forum postings, an individual project paper with topic, outline, presentation, and final product assignments, two open book quizzes, and a current affairs report.

- Assignments: There will be eight assignments (2.5% each) counting a total of 20% of the final grade. The assignments will follow each of the major milestones of the course. These assignments will be problems or questions from the text. They are a combination of Lesson Reviews and Lesson Activities and/or Labs. They are selected to provide the student with information to understand the concepts discussed. Assignments should be prepared in Microsoft Word and uploaded into the respective assignment folder by the due date.
- 2. Forums: There will be eight weekly Forum postings you will need to respond to. Answers should be 3-4 paragraphs with a topic sentence that restates the question and supporting sentences using the terms, concepts, and theories from the required readings. Each answer should be a minimum of 250 400 words (about 6 to 8 good sentences). You may attack, support or supplement other students' answers using the terms, concepts and theories from the required readings. All responses should be a courteous paragraph that contains a topic sentence with good supporting sentences. You may respond multiple times with a continuous discussion with points and counter points. The key requirement is to express your idea and then support your position using the terms, concepts and theories from the required readings to demonstrate to me that you understand the material. The Forum postings will count as 24% (3% for each discussion posting) of the final grade.
- 3. Report: There will be a report (6%) that I will ask you to prepare on a current affairs that may include a major incident, an exercise or anything major that may hit the news wires during the course.
- 4. **Quizzes:** There will be a one hour long and non-proctored quiz in Week 4 which counts as 10% of the final grade. It will be a combination of multiple-choice, true-false and/or essay type questions will be open book and open notes. There will be a one hour long and non-proctored quiz in Week 8 which counts as 10% of the final grade. It will be a combination of multiple-choice, true-false and/or essay type questions and will be open book and open notes.
- 5. <u>Project:</u> There will be a project paper (worth 15%) with topic selection (2%), outline (5%), and presentation (8%), for a total of 30% of the final grade.

All assignments, Forum question responses, and the quizzes are due by 12:00 midnight Eastern Time Sunday of the week assigned.

| Grade Instruments | Points Possible | % of Final Grade |
|---|--------------------|---------------------|
| Assignment (Weeks 1 to 8) (2.5 points each) | 20 | 20% |
| Forum Posts (Weeks 1 to 8) (3 points each) | 24 | 24% |
| Quiz1 (Week 4) | 10 | 10% |
| Current Affairs Report (Week 5) | 6 | 6% |
| Project Paper Topic (Week 2) | 2 | 2% |
| Project Paper Outline (Week 4) | 5 | 5% |
| Project Paper Presentation (Week 6) | 8 | 8% |
| Project Paper Final Product (Week 7) | 15 | 15% |
| Quiz2 (Week 8) | 10 | 10% |
| TOTAL | 100 Points | 100% |

Project Paper Milestones: Topic, Outline, PowerPoint Presentation, and Paper

Week 2: topic selection due

Week 3: outline due

Week 6: PowerPoint Presentation due

Week 7: Paper with Turnitin.com Originality Report due

Topic: Your paper topic must be on Information Assurance (IA) or a closely related area on (IA). **Your professor must approve your topic** before you can proceed with the outline, presentation, and paper. The approved topic must be the same for the outline assignment, the PowerPoint presentation, and the final paper.

Outline: The outline of the paper is the skeleton of your paper. It should include all areas you plan to discuss in your paper. It should include

- 1. A title page with the title, your name, date, class and school info
- 2. You may wish to include an abstract or leave it for the final paper.
- Headings of all areas you wish to discuss with a short statement describing the extent of your planned discussion
- 4. References page with at least half (5) of the required final product references you plan to include in your final paper

Presentation: the presentation must be done using PowerPoint or a compatible product used for creating presentations. This is basically an executive summary of the paper you plan to write. It should highlight the major headings included in your Outline – simplified and presentable to management. You should try to "sell" your project to management. Include rich graphics to make it interesting (and attractive), include notes to tell me how you will be presenting it (basically your cheat sheet for the presentation), and include references for the last slide to make it convincing.

Project Paper: Your paper will be graded on the following categories:

- Focus/Thesis
- Content/Subject Knowledge
- Organization of Ideas/Format
- Writing Conventions (Grammar and Mechanics)

• Use of Computer Technology/Applications (i.e. Appropriate use of word processor or spreadsheets as it relates to the finished product)

Details of Project Paper (15%): You must include at least ten references.

Prepare a 10-15 page paper in Microsoft Word (counts as 15% of the final grade) in APA format (see writing expectations in the Policies section) (350 words per page).

- 1. At a minimum include the following:
 - Detailed description of the area researched
 - Technology involved in the area
 - o Future trends in the area
 - Example companies involved in the area
 - Regulatory issues surrounding the area
 - Global implications for the area
 - o References (minimum of 10)
- 2. You may use resources from the APUS Online Library, any library, government library, or any peer-reviewed reference (Wikipedia and any other publicly-reviewed source is not accepted). The paper must by at least 10 pages double-spaced, 1" margin all around, black12 point fonts (Times New Roman or Arial) with correct citations of all utilized references/sources, (pictures, graphics, etc... are extra allowed but extra for the minimum page count). The title page and references are also required but don't count in the minimum page count. A minimum of 10 references are required.
- 3. The paper will be subjected to checking against plagiarism. The paper must follow acceptable originality criteria (no more than 15% max total, and 2% per individual source match are allowed).
- 4. Save the file using the following file naming convention: ISSC361_Project_First_Last.doc(x) (where first and last are your first and last names resp.) and submit the file in this assignment area

Originality report requirements:

- 1. The originality report must be less than 15% match
- 2. No single source shall be above 2%
- 3. You must submit the originality report with your paper to your Sakai classroom

If you do not follow these three requirement instructions you will get a 0 for your project paper assignment. I will give you the chance to rework your papers until an acceptable level of match is achieved.

At the end of the class, if you have not submitted your paper to turnitin.com, I will submit it anyways even after you would get a 0, to see the level of plagiarism found, if any. If turnitin.com matches more than 40% you will be subject to academic reporting.

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Grading Scale

Please see the student handbook to reference the University's grading scale.

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Course Outline

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|------|---|--------------------------|---|
| Week | Topic(s) | Learning Objective(s) | Assignment(s) |
| 1 | Textbook: Chapter 1: Security From the Ground Up Chapter 2: Controlling a Computer | CO – 1 | Forum postings for Week 1 are on Personal Introductions and Chapters 1&2 discussion questions. Week 1 Assignment |
| 2 | Textbook: Chapter 3: Controlling Files Chapter 4: Sharing Files | CO – 2 | Forum postings for Week 2 are on Chapters 3 &4 discussion questions. Week 2 Assignment Research Paper Topic Must be Approved |
| 3 | Textbook: Chapter 5: Storing Files Chapter 6: Authenticating People | CO – 3 | Forum postings for Week 3 are on Chapters 5 & 6 discussion questions. Week 3 Assignment |
| 4 | Textbook: Chapter 7: Encrypting Files Chapter 8: Secret and Public Keys | CO – 4 | Forum postings for Week 4 are on Chapters 7 & 8 discussion questions. Week 4 Assignment Research Paper Outline Due Quiz 1 |
| 5 | Textbook: Chapter 9: Encrypting Volumes Chapter 10: Connecting Computers | CO – 5 | Forum postings for Week 5 are on Chapters 9 & 10 discussion questions. Week 5 Assignment Current Affairs Report due |
| 6 | Textbook: Chapter 11: Networks of Networks Chapter 12: End-to-End Networking | CO – 6 | Forum postings for Week 6 are on Chapters 11 & 12 discussion questions. Week 6 Assignment Project Paper Presentation due |
| 7 | Textbook: Chapter 13: Enterprise Computing Chapter 14 Network Encryption: | CO – 7 | Forum postings for Week 7 are on Chapters 13 & 14 discussion questions. Week 7 Assignment Research Paper Due with Originality Report from Turnitin.com |
| 8 | Textbook: Chapter 15: Internet Services and Email Chapter 16: The World Wide Web Chapter 17(Optional Reading) | CO – 8 | Forum postings for Week 8 are on Chapters 15 & 16 discussion questions. Week 8 Assignment Quiz 2 |

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Polices

Please see the <u>student handbook</u> to reference all University policies. Quick links to frequently asked question about policies are listed below.

Drop/Withdrawal Policy
Plagiarism Policy
Extension Process and Policy

WRITING EXPECTATIONS

All written submissions should be submitted in a font and page set-up that is readable and neat. It is recommended that students try to adhere to a consistent format, which is described below.

- Typewritten in double-spaced format with a readable style and font and submitted inside the electronic classroom (unless classroom access is not possible and other arrangements have been approved by the professor).
- Arial 11 or 12-point font or Times New Roman styles.
- Page margins Top, Bottom, Left Side and Right Side = 1 inch, with reasonable accommodation being made for special situations and online submission variances.

CITATION AND REFERENCE STYLE

Assignments completed in a narrative essay or composition format must follow APA guidelines. This course will require students to use the citation and reference style established by the American Psychological Association (APA), in which case students should follow the guidelines set forth in *Publication Manual of the American Psychological Association* (6th ed.). (2010). Washington, D.C.: American Psychological Association.

LATE ASSIGNMENTS

Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. As adults, students, and working professionals I understand you must manage competing demands on your time. Should you need additional time to complete an assignment please contact me before the due date so we can discuss the situation and determine an acceptable resolution. Routine submission of late assignments is unacceptable and may result in points deducted from your final course grade. Assignments submitted late without a prearranged extension will be subject to a 10% late penalty. **No late assignments will be accepted after the last day of the course.**

Academic Services

ONLINE LIBRARY RESEARCH CENTER & LEARNING RESOURCES

The Online Library Resource Center is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Center provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to orc@apus.edu.

- **Charles Town Library and Inter Library Loan:** The University maintains a special library with a limited number of supporting volumes, collection of our professors' publication, and services to search and borrow research books and articles from other libraries.
- *Electronic Books:* You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.
- *Electronic Journals:* The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.
- Turnitin.com: Turnitin.com is a tool to improve student research skills that also detect plagiarism. Turnitin.com provides resources on developing topics and assignments that encourage and guide students in producing papers that are intellectually honest, original in thought, and clear in expression. This tool helps ensure a culture of adherence to the University's standards for intellectual honesty. Turnitin.com also reviews students' papers for matches with Internet materials and with thousands of student papers in its database, and returns an Originality Report to instructors and/or students.

• Smarthinking: Students have access to 10 free hours of tutoring service per year through Smarthinking. Tutoring is available in the following subjects: math (basic math through advanced calculus), science (biology, chemistry, and physics), accounting, statistics, economics, Spanish, writing, grammar, and more. Additional information is located in the Online Research Center. From the ORC home page, click on either the "Writing Center" or "Tutoring Center" and then click "Smarthinking." All login information is available.

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E-book Links

ISSC361 E-book Links

Adobe Reader is required to view these files. If you do not have this software, please log onto www.adobe.com to download the free reader.

You will need to log-in to each link with your student/faculty ID and password. You must be logged in to your campus page before you can access the links. Troubleshooting tips are available in the Online Library in the Course Materials & Bookstore section, and also in the HELP/FAQs section. Multiple troubleshooting tips are available in the following links:

http://apus.libanswers.com/a.php?qid=10718 and http://apus.libanswers.com/a.php?qid=9349 Please report any issues to ECM@apus.edu.

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Electronic Materials are provided under licensing or in keeping with Fair Use exemptions for your educational use only. You may quote and utilize this material for this, other APUS courses, and related scholarly pursuits. Unless the materials are in the Public Domain or specific written arrangements are made with the Copyright holders, you may not sell, share or otherwise distribute these documents for personal or other use without the likelihood of violating Copyright Law.

http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Frontmatter.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch01A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith_2013_Ch01B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch02A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch02B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch03A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch03B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch04A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith_2013_Ch04B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch05A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch05B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith_2013_Ch06A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch06B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch07A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith_2013_Ch07B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch08A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith_2013_Ch08B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith_2013_Ch09A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch09B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch10A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith_2013_Ch10B.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch11A.pdf http://ezproxy.apus.edu/login?url=http://ebooks.apus.edu/ISSC361/Smith 2013 Ch11B.pdf

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Appendix A – Grading Rubric

All written assignments will be assessed according to this rubric. Note that a score of 0 may be assigned in any category where your work does not meet the criteria for the beginning level.

| APUS Assignment | | | | | |
|------------------------------|---|---|--|---|--------|
| Rubric | EXEMPLARY | ACCOMPLISHED | DEVELOPING | BEGINNNIG | TOTAL |
| Undergraduate Level | LEVEL | LEVEL | LEVEL | LEVEL | POINTS |
| 300-400 | 4 | 3 | 2 | 1 | |
| FOCUS/THESIS | Student exhibits a defined and clear understanding of the assignment. Thesis is clearly defined and well constructed to help guide the reader throughout the assignment. Student builds upon the thesis of the assignment with well-documented and exceptional supporting facts, figures, and/or statements. | Establishes a good comprehension of topic and in the building of the thesis. Student demonstrates an effective presentation of thesis, with most support statements helping to support the key focus of assignment. | Student exhibits a basic understanding of the intended assignment, but the thesis is not fully supported throughout the assignment. While thesis helps to guide the development of the assignment, the reader may have some difficulty in seeing linkages between thoughts. While student has included a few supporting facts and statements, this has | Exhibits a limited understanding of the assignment. Reader is unable to follow the logic used for the thesis and development of key themes. Introduction of thesis is not clearly evident, and reader must look deeper to discover the focus of the writer. Student's writing is weak in the inclusion of supporting facts or statements. | 10 |
| CONTENT/SUBJECT KNOWLEDGE | Student demonstrates proficient command of the subject matter in the assignment. Assignment shows an impressive level of depth of student's ability to relate course content to practical examples and applications. Student provides comprehensive analysis of details, facts, and concepts in a logical sequence. | Student exhibits above average usage of subject matter in assignment. Student provides above average ability in relating course content in examples given. Details and facts presented provide an adequate presentation of student's current level of subject matter knowledge. | limited the quality of the assignment. The assignment reveals that the student has a general, fundamental understanding of the Resource. Whereas, there are areas of some concerning in the linkages provided between facts and supporting statements. Student generally explains concepts, but only meets the minimum requirements in this area. | Student tries to explain some concepts, but overlooks critical details. Assignment appears vague or incomplete in various segments. Student presents concepts in isolation, and does not perceive to have a logical sequencing of ideas. | 20 |

| CRITICAL THINKING SKILLS | Student demonstrates a higher-level of critical thinking necessary for 300-400 level work. Learner provides a strategic approach in presenting examples of problem solving or critical thinking, while drawing logical conclusions which are not immediately obvious. Student provides well-supported ideas and reflection with a variety of current and/or world views in the assignment. Student presents a genuine intellectual development of ideas throughout assignment. | Student exhibits a good command of critical thinking skills in the presentation of material and supporting statements. Assignment demonstrates the student's above average use of relating concepts by using a variety of factors. Overall, student provides adequate conclusions, with 2 or fewer errors. | Student takes a common, conventional approach in guiding the reader through various linkages and connections presented in assignment. However, student presents a limited perspective on key concepts throughout assignment. Student appears to have problems applying information in a problem-solving manner. | Student demonstrates beginning understanding of key concepts, but overlooks critical details. Learner is unable to apply information in a problem-solving fashion. Student presents confusing statements and facts in assignment. No evidence or little semblance of critical thinking skills. | 20 |
|---|--|--|---|--|----|
| ORGANIZATION OF IDEAS/FORMAT | Student thoroughly understands and excels in explaining all major points. An original, unique, and/or imaginative approach to overall ideas, concepts, and findings is presented. Overall format of assignment includes an appropriate introduction (or abstract), well- developed paragraphs, and conclusion. Finished assignment demonstrates student's ability to plan and organize research in a logical sequence. Student uses at least of 5-7 references in assignment. | Student explains the majority of points and concepts in the assignment. Learner demonstrates a good skill level in formatting and organizing material in assignment. Student presents an above average level of preparedness, with a few formatting errors. Assignment contains less than 5 resources. | Learner applies some points and concepts incorrectly. Student uses a variety of formatting styles, with some inconsistencies throughout the paper. Assignment does not have a continuous pattern of logical sequencing. Student uses less than 3 sources or references. | Assignment reveals formatting errors and a lack of organization. Student presents an incomplete attempt to provide linkages or explanation of key terms. The lack of appropriate references or source materials demonstrates the student's need for additional help or training in this area. Student needs to review and revise the assignment. | 20 |
| WRITING CONVENTIONS (GRAMMAR & MECHANICS) | Student demonstrates an excellent command of grammar, as well as presents research in a clear and concise writing style. Presents a thorough, extensive | Student provides an effective display of good writing and grammar. Assignment reflects student's ability to select appropriate word usage | Assignment reflects basic writing and grammar, but more than 5 errors. Key terms and concepts are somewhat vague and not completely explained by | Topics, concepts, and ideas are not coherently discussed or expressed in assignments. Student's writing style is weak and needs | 20 |

| | denoteredice oferd | and propert on alterna | aturdant Cturdant | inamuna ant alama with | |
|-----------------|--|------------------------------|-------------------------------|---------------------------|-----|
| | understanding of word usage. | and present an above | | improvement, along with | |
| | Student excels in the selection | average presentation of a | | numerous proofreading | |
| | and development of a well- | given topic or issue. | assignment. Student's | errors. Assignment | |
| | planned research assignment. | Assignment appears to be | | lacks clarity, | |
| | Assignment is error-free and | well written with no more | but demonstrates a basic | consistency, and | |
| | reflects student's ability to | than 3-5 errors. Student | understanding of the | correctness. Student | |
| | prepare a high-quality | provides a final written | subject matter. | needs to review and | |
| | academic assignment. | product that covers the | - | revise assignment. | |
| | , and the second | above-minimal | | · · | |
| | | requirements. | | | |
| USE OF COMPUTER | Student provides a high- | Assignment presents an | Student demonstrates a | Student needs to | 10 |
| TECHNOLOGY/ | caliber, formatted assignment. | above-average use of | basic knowledge of | develop better formatting | |
| APPLICATIONS | Learner exhibits excellent use | formatting skills, with less | computer applications. | skills. The student may | |
| | of computer technology in the | than 3 errors. Students | Appearance of final | need to take additional | |
| | development of assignment. | has a good command of | assignment demonstrates | training or obtain help | |
| | Quality and appropriateness of | computer applications to | the student's limited ability | from the Educator Help | |
| | stated references demonstrate | format information and/or | | Desk while preparing an | |
| | the student's ability to use | figures in an appropriate | • | assignment. Research | |
| | technology to conduct | format. Student uses at | | and resources presented | |
| | applicable research. Given | least two types of | Student may need to | in the assignment are | |
| | assignment includes | computer applications to | obtain further help in the | limited. Student needs | |
| | appropriate word processing, | produce a quality | use of computer | to expand research | |
| | spreadsheet and/or other | | applications and Internet | scope. The number of | |
| | • | assignment. | | | |
| | computer applications as part | | research. | formatting errors is not | |
| TOTAL DOUGLO | of the final product. | | | acceptable. | 400 |
| TOTAL POINTS | | | | | 100 |