

FREEHOLD REGIONAL HIGH SCHOOL DISTRICT

OFFICE OF CURRICULUM AND INSTRUCTION

INTERNATIONAL BACCALAUREATE PROGRAM

INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY, YEAR 2

Grade Level: 12

Credits: 5

BOARD OF EDUCATION ADOPTION DATE:

AUGUST 29, 2016

[SUPPORTING RESOURCES AVAILABLE IN DISTRICT RESOURCE SHARING](#)

APPENDIX A: ACCOMMODATIONS AND MODIFICATIONS

APPENDIX B: ASSESSMENT EVIDENCE

APPENDIX C: INTERDISCIPLINARY CONNECTIONS

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IB INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY SL, YEAR 2

COURSE PHILOSOPHY

The International Baccalaureate Organization provides the following philosophy: *“Students of group 3 subjects study individuals and societies. This means that they explore the interactions between humans and their environment in time and place. As a result, these subjects are often known collectively as the human sciences or social sciences. The IB Diploma Programme Information Technology in a Global Society (ITGS) course is the study and evaluation of the impacts of information technology (IT) on individuals and society. It explores the advantages and disadvantages of the access and use of digitized information at the local and global level. ITGS provides a framework for the student to make informed judgments and decisions about the use of IT within social contexts. Although ITGS shares methods of critical investigation and analysis with other social sciences, it also considers social and ethical considerations that are common to other subjects in group 3. Students come into contact with IT on a daily basis because it is so pervasive in the world in which we live. This increasingly widespread use of IT inevitably raises important questions with regard to the social and ethical considerations that shape our society today. ITGS offers an opportunity for a systematic study of these considerations, whose range is such that they fall outside the scope of any other single discipline.”*

COURSE DESCRIPTION

The International Baccalaureate Organization provides the following description: *“The nature of the subject is defined by the use of fundamental ITGS terms. For the purpose of the ITGS syllabus the following definitions apply. “Information technology” (IT) is the study, design, development, implementation, support or maintenance of computer-based information systems. “Social and ethical significance” refers to the effects that the development, implementation and use of information technology has on individuals and societies. Social impacts and ethical considerations are not mutually exclusive and are therefore categorized as a single entity. However, in general: social impacts tend to refer to the effects of IT on human life and ethical considerations tend to refer to the responsibility and accountability involved in the design and implementation of IT. An “information system” is a collection of people, information technologies, data, processes and policies organized to accomplish specific functions and solve specific problems.”*

COURSE SUMMARY

COURSE GOALS

CG1: Students will evaluate the impact of current and emerging IT systems on a range of stakeholders and various real-world scenarios.

CG2: Students will evaluate social and ethical considerations arising from the widespread use of IT by individuals, families, communities, organizations and societies at the local and global level.

CG3: Students will create and justify IT solutions for a specified client or end user to solve real-world problems.

COURSE ENDURING UNDERSTANDINGS

CEU1: Individuals, groups, communities, corporations, and societies are impacted by IT developments and the impact may vary for each.

CEU2: Social impacts and ethical considerations of IT need to be analyzed from both a local and a global perspective, recognizing that attitudes and opinions are diverse within and between different cultures.

CEU3: Selecting the correct IT application is just as important as finding a solution.

COURSE ESSENTIAL QUESTIONS

CEQ1a: What are the capabilities of current and emerging IT systems?

CEQ1b: What is their impact on a range of stakeholders?

CEQ2a: What are the ethical issues that may evolve when introducing new forms of IT locally and globally? Who is responsible and accountable?

CEQ2b: How will the perception of new forms of IT differ based on cultural perspective?

CEQ2c: What are the possible social impacts of IT on human life?

CEQ2d: What is fair in terms of access to technology?

CEQ3a: What is more important – the problem solving process or the actual solutions?

CEQ3b: How does a person choose the best IT solution to a given problem?

UNIT GOALS & PACING

UNIT TITLE	UNIT GOALS	RECOMMENDED DURATION
<u>Unit 4: Home and Leisure</u>	Students will evaluate IT systems and the ethical and social impacts of IT in home and leisure scenarios.	7 weeks
<u>Unit 5: Environment</u>	Students will evaluate IT systems and the ethical and social impacts of IT in environment scenarios.	7 weeks
<u>Unit 6: Education and Training</u>	Students will evaluate IT systems and the ethical and social impacts of IT in education and training scenarios.	7 weeks
<u>Unit 7: Politics and Government</u>	Students will evaluate IT systems and the ethical and social impacts of IT in politics and government scenarios.	7 weeks
<u>Unit 8: IB Internal Assessment</u>	Students will design, create, and critique a product for a client that demonstrates practical IT and project management skills.	6 weeks

UNIT OVERVIEW

UNIT LEARNING GOALS

Students will evaluate IT systems and the ethical and social impacts of IT in home and leisure scenarios.

UNIT LEARNING SCALE

4	In addition to score 3 performances, the student can evaluate and formulate predictions about potential future applications of IT in home and leisure.
3	<p>The student can:</p> <ul style="list-style-type: none"> • evaluate social and ethical considerations arising from the widespread use of IT by individuals, families, communities, organizations and societies at the local and global level; • describe the technologies used in copyright infringement; • evaluate possible solutions to copyright infringement; • evaluate impacts of computer gaming; • explain how news and media broadcast is using IT; • evaluate the effects of citizen journalism and social media; • explain how IT is used in digital preservation and restoration; • explain how networks, the Internet, and personal and public communications impact home and leisure IT; and • design an independent IT solution for an end user client.
2	The student sometimes needs assistance from a teacher, makes minor mistakes, and/or can do the majority of level 3 performances.
1	The student needs assistance to avoid major errors in attempting to reach score 3 performances.
0	Even with help, the student does not exhibit understanding of performances listed in score 3.

ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
EU1: WiFi connections have enabled constant access to communication technologies and instantaneous reactions to spreading information.	EQ1a: Is constant and consistent access to the Internet and social media a good or bad thing? EQ1b: Is the ability to receive and react instantaneously to information a good thing?
EU2: Large scale copyright infringement has become an increasing challenge to businesses that operate in digital media.	EQ2a: How has availability of digital media (e.g., music, movies, online streaming) changed business and lives? EQ2b: Why do you agree or disagree with digital piracy laws? Does the crime fit the time?

COMMON ASSESSMENT	
ALIGNMENT	DESCRIPTION
LG1 EU1, EQ1 a, b EU2, EQ2 a, b 8.1.12.D.4 8.1.12.E.2 WHST.11-12.1 RST.11-12.2 DOK 3	<p>Students will write an essay using the following criteria on an applied scenario related to home and leisure. Applied scenarios may include but are not limited to: homes and home networks, digital entertainment, social networking, published and broadcasted information, digital policing, hardware, software, and networks.</p> <p>Criterion A: The issue and the stakeholder(s)</p> <ul style="list-style-type: none"> Describe one social/ethical concern related to the IT system. Describe the relationship of one primary stakeholder to the IT system. <p>Criterion B: The IT concepts and processes</p> <ul style="list-style-type: none"> Describe, step by step, how the IT system works. Explain the relationships between the IT system and the social/ethical concern described in Criterion A. <p>Criterion C: The impact of the social/ethical issue(s) on the relevant stakeholders</p> <ul style="list-style-type: none"> Evaluate the impact of the social/ethical issues on the relevant stakeholders. <p>Criterion D: A solution to a problem arising from the article</p> <ul style="list-style-type: none"> Evaluate one solution that addresses at least one problem identified in Criterion C.
LG1 CEU1, CEQ1a, b CEU2, CEQ2a, b, c, d CEU3, CEQ3a, b 9.2.12.C.7 8.1.12.D.5 WHST.11-12.1 DOK 4	<p>INTERNAL ASSESSMENT (PROJECT) Criterion D: Product design</p> <p>The students will create a product design using the product design form. The following must be include:</p> <ul style="list-style-type: none"> design methodologies appropriate to the type of IT product being designed; different levels of draft design, including the overall structure, the internal layout of the product and specific elements used within the product (e.g., fonts, graphic elements, effects); identification of a range of appropriate resources and techniques required for the product development; evidence of a test plan that addresses the functionality of the product; and evidence of client agreement to the design and development of the product. <p>The product design should have enough detail that it could be created by an created by an IT literate third party.</p>

TARGETED STANDARDS		
DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO INTRODUCE
3-D modeling augmented reality digital entertainment digital policing home automation home networks MMOG peer-to-peer piracy published and broadcasted information smart home social networking social news streaming media	Identify multiple sources of information presented in diverse formats that can be used to address a question or solve a problem (DOK 2)	RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
	Integrate multiple sources of information presented in diverse formats to address a question or solve a problem (DOK 3)	
	Describe the technologies used in copyright infringement (DOK 2)	8.1.12.D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
	Evaluate possible solutions to copyright infringement (DOK 2)	8.1.12.E.2 Research and evaluate the impact on society of the unethical use of digital tools and present your research to peers. 8.1.12.D.4 Research and understand the positive and negative impact of one's digital footprint.
	Evaluate the impact of computer gaming (DOK 3)	
	Explain how news and media is broadcast using IT (DOK 2)	
	Evaluate the effects of citizen journalism and social media (DOK 3)	
	Explain how IT is used in digital preservation and restoration (DOK 2)	
DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO FURTHER DEVELOP
authenticity digital citizenship digital divide/equality of access ethical approaches ethical issues globalization/cultural diversity information technology intellectual property ITGS command terms people and machines policies privacy and anonymity reliability and integrity security social and ethical significance social impacts stakeholders standards and protocols surveillance	Determine the central ideas or conclusions of a text (DOK 1)	RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
	Summarize complex concepts, processes, or information presented in text (DOK 2)	
	Write arguments introducing a precise, knowledgeable claim(s) (DOK 4)	WHST.11-12.1 Write arguments focused on discipline-specific content.
	Write arguments creating an organization that logically sequences the claims and counter-claims (DOK 4)	
	Explain the social impacts of IT as related to home and leisure activities (DOK 2)	9.2.12.C.7 Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.
	Explain the ethical issues of IT as related to home and leisure activities. (DOK 2)	
	Explain the key components of the ITGS triangle (DOK 2)	8.1.12.D.5 Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.
	Identify examples of IT currently used in the home (DOK 2)	
Analyze a home and leisure scenario using the ITGS triangle (DOK 3)		
Identify the stakeholders involved (DOK 1)	8.1.12.A.3 Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.	
Identify the relevant IT used in various home and leisure applications (DOK 1)		

IB INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY SL, YEAR 2**UNIT 5: Environment****SUGGESTED DURATION: 7 WEEKS****UNIT OVERVIEW****UNIT LEARNING GOALS**

Students will evaluate IT systems and the ethical and social impacts of IT in environment scenarios.

UNIT LEARNING SCALE

4	In addition to score 3 performances, the student can evaluate and formulate predictions about potential future applications of IT in environmental issues.	
3	<p>The student can:</p> <ul style="list-style-type: none"> • evaluate social and ethical considerations arising from the widespread use of IT by individuals, families, communities, organizations and societies at the local and global level; • distinguish analog data and digital data; • describe the applications of digital imaging and mapping; • explain how digital imaging and mapping work; • identify the toxins found in electronic equipment; • explain how to safely dispose of IT equipment; • evaluate the environmental impacts of IT; • explain how modeling, simulations, and databases will impact environmental IT; and • design an independent IT solution for an end user client. 	
2	The student sometimes needs assistance from a teacher, makes minor mistakes, and/or can do the majority of level 3 performances.	
1	The student needs assistance to avoid major errors in attempting to reach score 3 performances.	
0	Even with help, the student does not exhibit understanding of performances listed in score 3.	
ENDURING UNDERSTANDINGS		ESSENTIAL QUESTIONS
EU1: IT provides many opportunities to study and understand the world around us, enabling us to take better preserve and care of our environment.		EQ1: How have data logging systems allowed us to predict and react to environmental futures (e.g., animal populations, weather)?
EU2: The rapid advancement of IT has led to an ever expanding increase of digital waste.		EQ2a: What are the repercussions for our growing carbon footprint? EQ2b: What solutions do we have to prolong the life cycles of our IT products and offset our e-waste? What solutions do we have for e-waste?

COMMON ASSESSMENT

ALIGNMENT	DESCRIPTION
LG1 EU1, EQ1 EU2, EQ2 a, b 8.1.12.D.5 WHST.11-12.1 DOK 3	<p>Students will write an essay using the following criteria on an applied scenario related to the environment. Applied scenarios may include but are not limited to: modeling and simulations, data logging, satellite communication, mapping virtual globes, e-waste, and resource depletion.</p> <p>Criterion A: The issue and the stakeholder(s)</p> <ul style="list-style-type: none">• Describe one social/ethical concern related to the IT system.• Describe the relationship of one primary stakeholder to the IT system. <p>Criterion B: The IT concepts and processes</p> <ul style="list-style-type: none">• Describe, step by step, how the IT system works.• Explain the relationships between the IT system and the social/ethical concern described in Criterion A. <p>Criterion C: The impact of the social/ethical issue(s) on the relevant stakeholders</p> <ul style="list-style-type: none">• Evaluate the impact of the social/ethical issues on the relevant stakeholders. <p>Criterion D: A solution to a problem arising from the article</p> <ul style="list-style-type: none">• Evaluate one solution that addresses at least one problem identified in Criterion C.
LG1 CEU1, CEQ1a, b CEU2, CEQ2a, b, c, d CEU3, CEQ3a, b 8.1.12.D.5 WHST.11-12.1 DOK 4	<p>INTERNAL ASSESSMENT (PROJECT) Criterion E: Product development</p> <p>Students will create the product using the information submitted in the requirements specification (criterion B), project schedule (criterion C) and the product design (criterion D). Students must also include a list of techniques used in the product.</p> <p>The following information must be included to justify the creation of the product:</p> <ul style="list-style-type: none">• the structure of the product and why it is appropriate;• the techniques used in the development of the product and the reasons why they are appropriate to it; and• additional technical information, if appropriate, that will support the functionality of the product, such as web hosting or security information.

TARGETED STANDARDS		
DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO INTRODUCE
data centers data logging digital data digital divide digital footprint e-waste	Evaluate feedback for value as new arguments or information (DOK 3) Use technology to product, publish, and update individual or shared writing products (DOK 3) Use technology to include new arguments of information (DOK 3)	WHST.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
geographical information system geotagged GPS mapping modeling and simulations planned obsolescence recycling	Distinguish analog data and digital data (DOK 2) Describe the applications of digital imaging and mapping (DOK 1) Explain how digital imaging and mapping work (DOK 2)	8.1.12.A.4 Construct a spreadsheet workbook with multiple worksheets, rename tabs to reflect the data on the worksheet, and use mathematical or logical functions, charts and data from all worksheets to convey the results. 8.1.12.A.5 Create a report from a relational database consisting of at least two tables and describe the process, and explain the report results.
resource depletion satellite communication sensors virtual globes virtualization	Identify the toxins found in electronic equipment (DOK 1) Explain how to safely dispose of IT equipment (DOK 2) Evaluate the environmental impacts of IT (DOK 3)	8.1.12.D.5 Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.

DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO FURTHER DEVELOP
authenticity digital citizenship digital divide/equality of access ethical approaches ethical issues globalization/cultural diversity information technology intellectual property ITGS command terms people and machines policies privacy and anonymity reliability and integrity security social and ethical significance social impacts stakeholders standards and protocols surveillance	Determine the central ideas or conclusions of a text (DOK 1) Summarize complex concepts, processes, or information presented in text (DOK 2)	RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
	Write arguments introducing a precise, knowledgeable claim(s) (DOK 4) Write arguments creating an organization that logically sequences the claims and counter-claims (DOK 4)	WHST.11-12.1 Write arguments focused on discipline-specific content.
	Explain the social impacts of IT as related to environmental applications (DOK 2) Explain the ethical issues of IT as related to environmental applications (DOK 2)	9.2.12.C.7 Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.
	Explain the key components of the ITGS triangle (DOK 2) Identify examples of IT currently used in environmental applications (DOK 1) Analyze an IT environmental scenario using the ITGS triangle (DOK 3)	8.1.12.D.5 Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.
	Identify the stakeholders involved (DOK 1) Identify the relevant IT used in various environmental applications (DOK 1)	8.1.12.A.3 Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.

UNIT OVERVIEW

UNIT LEARNING GOALS

Students will evaluate IT systems and the ethical and social impacts of IT in education and training scenarios.

UNIT LEARNING SCALE

4	In addition to score 3 performances, the student can evaluate and formulate predictions about potential future applications of IT in education and training.
3	<p>The student can:</p> <ul style="list-style-type: none"> • evaluate social and ethical considerations arising from the use of IT by individuals, families, communities, organizations and societies at the local and global level; • describe the technologies used for teaching and learning; • explain how IT can assist users with special needs; • explain how IT is used in school administration; • discuss the types of resources available online; • evaluate the benefits of information technologies in the classroom; • explain how software, the Internet, and personal and public communications will impact Educational IT; and • design an independent IT solution for an end user client.
2	The student sometimes needs assistance from a teacher, makes minor mistakes, and/or can do the majority of level 3 performances.
1	The student needs assistance to avoid major errors in attempting to reach score 3 performances.
0	Even with help, the student does not exhibit understanding of performances listed in score 3.
ENDURING UNDERSTANDINGS	
ESSENTIAL QUESTIONS	
EU1: IT is dramatically altering education, changing how we learn and what we learn.	EQ1: How has technology changed what we learn and how we education?

COMMON ASSESSMENT

ALIGNMENT	DESCRIPTION
LG1 EU1, EQ1 8.1.12.D.5 8.1.12.F.1 WHST.11-12.1 RST.11-12.2 DOK 3	<p>Students will write an essay using the following criteria on an applied scenario related to education and training. Applied scenarios may include but are not limited to: distance learning, use of IT in teaching and learning, hardware and network technologies in the classroom, provisions for special needs, and school administration.</p> <p>Criterion A: The issue and the stakeholder(s)</p> <ul style="list-style-type: none"> • Describe one social/ethical concern related to the IT system. • Describe the relationship of one primary stakeholder to the IT system. <p>Criterion B: The IT concepts and processes</p> <ul style="list-style-type: none"> • Describe, step by step, how the IT system works. • Explain the relationships between the IT system and the social/ethical concern described in Criterion A. <p>Criterion C: The impact of the social/ethical issue(s) on the relevant stakeholders</p> <ul style="list-style-type: none"> • Evaluate the impact of the social/ethical issues on the relevant stakeholders. <p>Criterion D: A solution to a problem arising from the article</p> <ul style="list-style-type: none"> • Evaluate one solution that addresses at least one problem identified in Criterion C.

ALIGNMENT	DESCRIPTION
LG1 CEU1, CEQ1a, b CEU2, CEQ2a, b, c, d CEU3, CEQ3a, b 9.2.12.C.7 8.1.12.A.3 8.1.12.D.5 WHST.11-12.1 DOK 4	<p>INTERNAL ASSESSMENT (PROJECT) Criterion F: Product evaluation and future product development</p> <p>The client will evaluate the product and provide feedback including design and product flaws. The clients should then make recommendations for the future development of the product. Their evaluation should be based on the specific performance criteria. The students can relay their feedback from the client in a variety of ways including: a written record of the interview (either a summary or transcript), a sound file, a video, questionnaire, or an exchange of emails.</p> <p>The student will use the client feedback and the evaluation to recommend future developments of the product and their benefit to the client and/or other stakeholders.</p>

TARGETED STANDARDS		
DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO INTRODUCE
acceptable use policy accessibility blended learning Children’s Internet Protection Act cyberbullying distance learning educational software edutainment e-learning hardware and network technologies in the classroom plagiarism podcast provisions for special needs school administration telelearning web 2.0	Discuss the types of resources available online (DOK 2)	RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
	Evaluate the benefits of information technologies in the classroom (DOK 3)	
	Describe the technologies used for teaching and learning (DOK 2)	8.1.12.D.5 Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs
	Explain how IT can assist users with special needs (DOK 2)	8.1.12.F.1 Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs

DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO FURTHER DEVELOP
authenticity digital citizenship digital divide/equality of access	Determine the central ideas or conclusions of a text (DOK 1) Summarize complex concepts, processes, or information presented in text (DOK 2)	RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
ethical approaches ethical issues globalization/cultural diversity information technology intellectual property ITGS command terms	Write arguments introducing a precise, knowledgeable claim(s) (DOK 4) Write arguments creating an organization that logically sequences the claims and counter-claims (DOK 4)	WHST.11-12.1 Write arguments focused on discipline-specific content.
people and machines policies privacy and anonymity reliability and integrity security	Explain the social impacts of IT as related to education and training. (DOK 2) Explain the ethical issues of IT as related to education and training. (DOK 2)	9.2.12.C.7 Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.
social and ethical significance social impacts stakeholders standards and protocols surveillance	Explain the key components of the ITGS triangle (DOK 2) Identify examples of IT currently used in education and training (DOK 1) Analyze an education or training scenario using the ITGS triangle (DOK 3)	8.1.12.D.5 Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.
	Identify the stakeholders involved (DOK 1) Identify the relevant IT used in various education and training applications (DOK 1)	8.1.12.A.3 Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.

UNIT OVERVIEW

UNIT LEARNING GOALS

Students will evaluate IT systems and the ethical and social impacts of IT in politics and government scenarios.

UNIT LEARNING SCALE

4	In addition to score 3 performances, the student can evaluate and formulate predictions about potential future applications of IT in politics and government.
3	<p>The student can:</p> <ul style="list-style-type: none"> • evaluate social and ethical considerations arising from the use of it by individuals, families, communities, organizations and societies at the local and global level; • explain how Internet content can be filtered; • evaluate the ethical and social impacts of Internet filtering; • describe the technologies used for electronic and online voting; • evaluate the social issues related to electronic and online voting; • explain how government can use the Internet to provide services; • describe how IT can be used by the military; • evaluate the use of IT for military purposes; • explain how modeling, simulations, and databases will impact political and government IT; and • design an independent IT solution for an end user client.
2	The student sometimes needs assistance from a teacher, makes minor mistakes, and/or can do the majority of level 3 performances.
1	The student needs assistance to avoid major errors in attempting to reach score 3 performances.
0	Even with help, the student does not exhibit understanding of performances listed in score 3.

ENDURING UNDERSTANDINGS

ESSENTIAL QUESTIONS

EU1: IT can be a great tool to increase political transparency, information sharing, and enfranchisement.

EQ1: Has the effects of IT on politics been beneficial?

EU2: Governments may use IT to control the flow of information

EQ2: Does government have a right to control the flow of information?

EU3: Modern warfare will include digital attacks for information.

EQ3: What do we mean by digital warfare?

COMMON ASSESSMENT

ALIGNMENT	DESCRIPTION
LG1 EU1, EQ1 EU2, EQ2 EU3, EQ3 8.1.12.D.3 8.1.12.D.5 8.1.12.E.2 8.1.12.F.1 WHST.11-12.1 RST.11-12.2 DOK 3	<p>Students will write an essay using the following criteria on an applied scenario related to politics and government. Applied scenarios may include but are not limited to: political processes, government information sites, access to and update of personal information held on government databases, government control and use of information, law and order, and military applications.</p> <p>Criterion A: The issue and the stakeholder(s)</p> <ul style="list-style-type: none"> Describe one social/ethical concern related to the IT system. Describe the relationship of one primary stakeholder to the IT system. <p>Criterion B: The IT concepts and processes</p> <ul style="list-style-type: none"> Describe, step by step, how the IT system works. Explain the relationships between the IT system and the social/ethical concern described in Criterion A. <p>Criterion C: The impact of the social/ethical issue(s) on the relevant stakeholders</p> <ul style="list-style-type: none"> Evaluate the impact of the social/ethical issues on the relevant stakeholders. <p>Criterion D: A solution to a problem arising from the article</p> <ul style="list-style-type: none"> Evaluate one solution that addresses at least one problem identified in Criterion C.
LG1 CEU1, CEQ1a, b CEU2, CEQ2a, b, c, d CEU3, CEQ3a, b 9.2.12.C.7 8.1.12.D.5 WHST.11-12.1 DOK 4	<p>INTERNAL ASSESSMENT (PROJECT) Criterion G: Required elements</p> <p>Student will ensure their internal assessment has the required elements:</p> <ul style="list-style-type: none"> The content and functionality of the product are sufficient to reliably evaluate its effectiveness. The prescribed cover page is used and functions as required. The project is organized in such a way that there is evidence of the use of appropriate folder names and structures that enable individual files to be located if links fail.

TARGETED STANDARDS

DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO INTRODUCE
government control and use of information government databases government information sites law and order military IT political processes	Describe how data mining and social media are being utilized in political campaigns (DOK 2)	RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
	Explain how Internet content can be filtered. (DOK 2)	8.1.12.D.3 Compare and contrast policies on filtering and censorship both locally and globally.
	Evaluate the ethical and social impacts of Internet filtering. (DOK 3)	
	Describe the technologies used for electronic and online voting (DOK 2)	8.1.12.D.5 Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.
	Evaluate the social issues related to electronic and online voting (DOK 3)	

DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO INTRODUCE
(same as above)	Explain how government can use the Internet to provide services (DOK 2)	8.1.12.F.1 Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.
	Describe how emerging technologies are being used in military operations (DOK 2)	8.1.12.E.2 Research and evaluate the impact on society of the unethical use of digital tools and present your research to peers.
	Evaluate the social and ethical impacts of the use of IT for military purposes (DOK 3)	
DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO FURTHER DEVELOP
authenticity digital citizenship digital divide/equality of access ethical approaches ethical issues globalization/cultural diversity information technology intellectual property ITGS command terms people and machines policies privacy and anonymity reliability and integrity security social and ethical significance social impacts stakeholders standards and protocols surveillance	Determine the central ideas or conclusions of a text (DOK 1)	RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
	Summarize complex concepts, processes, or information presented in text (DOK 2)	
	Write arguments introducing a precise, knowledgeable claim(s) (DOK 4)	WHST.11-12.1 Write arguments focused on discipline-specific content.
	Write arguments creating an organization that logically sequences the claims and counter-claims (DOK 4)	
	Explain the social impacts of IT as related to politics and government (DOK 2)	9.2.12.C.7 Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.
	Explain the ethical issues of IT as related to politics and government (DOK 2)	
	Identify examples of IT used in politics and government (DOK 1)	8.1.12.D.5 Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.
Analyze a political or government scenario using the ITGS triangle (DOK 3)		
Identify the stakeholders involved (DOK 1)	8.1.12.A.3 Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.	
Identify the relevant IT used in various political and government applications (DOK 1)		

UNIT OVERVIEW

UNIT LEARNING GOALS

Students will design, create, and critique a product for a client that demonstrates practical IT and project management skills.

UNIT LEARNING SCALE

4	In addition to score 3 performances, student can: <ul style="list-style-type: none"> • demonstrate above and beyond the IA requirements; • has used advanced techniques independently researched outside of the class; and/or • created a permanent IT solution for their client.
3	The student can: <ul style="list-style-type: none"> • create an IT solution for a real world client; and • manage a project through the duration of the course, aligned to the given criteria.
2	The student sometimes needs assistance from a teacher, makes minor mistakes, and/or can do the majority of level 3 performances.
1	The student needs assistance to avoid major errors in attempting to reach score 3 performances.
0	Even with help, the student does not exhibit understanding of performances listed in score 3.

ENDURING UNDERSTANDINGS

ESSENTIAL QUESTIONS

CEU1: Evaluation of social and ethical considerations arising from the widespread use of IT in the nature and activities of individuals and societies at the local and global level.	CEQ1A: What are the capabilities of current and emerging IT systems? CEQ1B: What is their impact on a range of stakeholders?
CEU2: Social impacts and ethical considerations of IT need to be analyzed from both a local and a global perspective, recognizing that attitudes and opinions are diverse within and between different cultures.	CEQ2a: What are the ethical issues that may evolve when introducing new forms of IT locally and globally? Who is responsible and accountable? CEQ2b: How will the perception of new forms of IT differ based on cultural perspective? CEQ2c: What are the possible social impacts of IT on human life?
CEU3: Selecting the correct IT application is just as important as finding a solution.	CEQ3a: What is more important – the problem solving process or actual solutions? CEQ3b: How does a person choose the best IT solution to a given problem?

COMMON ASSESSMENT

ALIGNMENT	DESCRIPTION
LG1 CEU1, CEQ1a, b CEU2, CEQ2a, b, c, d CEU3, CEQ3a, b 8.1.12.C.1 WHST.11-12.6 DOK 4	INTERNAL ASSESSMENT (PROJECT) Students will complete the internal assessment using the criterion outlined in Units 1-7's common assessments.

TARGETED STANDARDS		
DECLARATIVE KNOWLEDGE	PROCEDURAL KNOWLEDGE	STANDARDS TO INTRODUCE
analysis client developer feedback future product development initial consultation initial investigation IT solution problem product product design product development product evaluation project management project schedule	Describe the IT solution development through the use of criterion (DOK 3)	WHST.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
	Design and implement a project schedule (DOK 3) Develop a product to address a problem for a client (DOK 3)	8.1.12.C.1 Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.