



Review Test Submission: Hour Exam 2 Fall 2022

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Course	Fall 2022 TTU Ethics in Engineering Practice and Research (ENGR-5392-D01) Full Term
Test	Hour Exam 2 Fall 2022
Started	11/9/22 2:33 PM
Submitted	11/9/22 3:36 PM
Due Date	11/11/22 11:59 PM
Status	Completed
Attempt Score	95.33333 out of 100 points
Time Elapsed	1 hour, 3 minutes out of 1 hour and 30 minutes
Instructions	Read each question carefully. Think carefully about true/false statements. If any part of the statement is false, then the correct answer is false. On multiple answer questions, negative partial credit results from selecting a wrong answer, however, the question total value will not be less than zero. The Critical Thinking Essay question involves the application of Cross Impact Analysis to research misconduct. The Critical Thinking Essay question is available in the Major Exams folder so you can think about your answer in advance of the exam. You can prepare your answer in advance and then cut and paste it into the answer space. <u>Note that Blackboard requires CTRL-C and CTRL-V to copy and paste.</u>
Results Displayed	All Answers, Submitted Answers, Correct Answers, Feedback, Incorrectly Answered Questions

Question 1

0 out of 0 points



You may use the text book, class notes, current event articles and previous assessments as resources. You may not, however, receive help from any other person in completing the examination. Answer True to affirm that you completed the examination independently.

Selected Answer: ☒ True

Answers: ☒ True
☐ False

Question 2

2 out of 2 points



Incident at Morales ---

Technically competent, ethically sensitive, reasonable people may have different perspectives and can disagree when faced with complex ethical issues

Selected Answer: ☒ True

Answers: ☒ True
☐ False

Question 3

2 out of 2 points



Incident at Morales ---

Dominique asks whether it is ethical to hire an engineer who has recently worked for a competitor, and Chuck replies that while employed as a contractor at Chemitoil, Fred was not required to sign a non-disclosure agreement. Select the best answer regarding an engineer's ethical obligations.

Selected Answer: ☒ A.
Regardless of whether the engineer being hired signed a non-disclosure agreement or not, ethical issues are always a consideration.

Answers: ☒ A.
Regardless of whether the engineer being hired signed a non-disclosure agreement or not, ethical issues are always a consideration.

B.
As long as the engineer being hired did not sign a non-disclosure agreement, there are no ethical issues.

C.
In states with "right to work laws", engineers are under no obligation to protect proprietary information when changing employers.

D. None of the above statements are applicable.

E.
Engineers are ethically free to use any and all knowledge gained in their employment when changing employers.

Question 4

2 out of 2 points



Incident at Morales ---

Inflating a project budget as a hedge against potential budget cuts ...

Selected



D.

Answer:

None of the other answers are correct statements nor are they considered ethical practice.

Answers:

A.

is the same as providing contingency funds and considered ethical practice.

B.

is expected by senior management and considered ethical practice.

C.

is the standard way of protecting a project from across the board cuts and considered ethical practice.



D.

None of the other answers are correct statements nor are they considered ethical practice.

Question 5

2 out of 2 points



Incident at Morales ---

While ethics is an integral component of engineering practice, ordinary business decision-making should take precedence over engineering ethics.

Selected Answer:



False

Answers:

☐ True

False

Question 6

2 out of 2 points



Incident at Morales ---

What is the primary motivation for Phaust hiring a licensed Professional Engineer (P.E.) away from Chemitoil, a competitor?

Selected

Answer:



D.

To obtain proprietary knowledge of a competitor's product and production processes.

Answers:

A. To replace an engineer who recently retired.

B. All of the above.

C.

To hire a Spanish speaking engineer with knowledge of Mexican environmental regulations.



D.

To obtain proprietary knowledge of a competitor's product and production processes.


E. None of the above

Question 7

2 out of 2 points

**Cross Impact Analysis:**

One of the most important steps in cross impact modeling is to identify a set of interacting variables, facts, issues, policies, actions, decisions and outcomes that describe the situation.

Selected Answer:  True

Answers:



True

False

Question 8

2 out of 2 points

**Cross Impact Analysis:**

Select items in the following list that are most useful for identifying variables in cross impact modeling.

Selected
Answers:



A.

Identify ethical, technical, and economic issues and problems



B.

Identify affected parties (stakeholders) and their rights and responsibilities

Identify social and political constraints on possible solutions



C.



D.

Identify alternative courses of action that may be taken to meet objectives.



E.

Identify possible consequences of alternative actions and decisions

Answers:



A.

Identify ethical, technical, and economic issues and problems



B.

Identify affected parties (stakeholders) and their rights and responsibilities

Identify social and political constraints on possible solutions



C.



D.

Identify alternative courses of action that may be taken to meet objectives.



E.

Identify possible consequences of alternative actions and decisions

F. Include only variables that can be quantified

G. Include only variables based on stakeholder agendas

H. All of the above

I. None of the above

**Cross Impact Analysis:**

When filling in a cross impact matrix variables cannot influence themselves, thus diagonal of matrix diagonal will always be filled with zeros or left blank.

Selected Answer: ☒ True

Answers: ☒ True
☐ False

Question 10

2 out of 2 points

**Cross Impact Analysis: ---**

If a cross impact model involves a list of 30 variables there could be up to 900 pair wise interactions between the variables.

Selected Answer: ☒ True

Answers: ☒ True
☐ False

Question 11

2 out of 2 points

**Cross Impact Analysis: ---**

The most important thing we do in a cross impact analysis is to write an ethics narrative that informs participants and other stakeholders about which variables have the most influence on changing outcomes in a desired direction to achieve our objectives

Selected Answer: ☒ True

Answers: ☒ True
☐ False

Question 12

30 out of 30 points

**Background:**

Diederik Stapel fabricated research data and published more than ten refereed journal articles in which the research data was fabricated, figures were misrepresented, and his research methods were not implemented as described. Almost all the work of South Korean stem-cell researcher Hwang Woo Suk was discovered to be fraudulent. Harvard evolutionary biologist Marc Houser was discovered to have fabricated data in several of his journal papers.

Unfortunately, examples of research misconduct are becoming more common and visible. When well published researchers have their papers retracted by refereed journals the negative impact is very difficult to repair. Other researchers who reference or use the fraudulent data and conclusions suffer lasting damage. Subsequent published research that is based on fraudulent data from earlier papers can span decades and involve hundreds of papers. The number of derivative papers involved can grow exponentially. While these derivative papers are not fundamentally fraudulent, their data and conclusions are to varying degrees negatively impacted. The derivative papers are rarely, if ever, withdrawn or revised after publication. Users of derivative papers have no obvious way of knowing they referenced fraudulent papers several generations removed.

This raises an ethical dilemma regarding what to do about the derivative papers.

Critical Thinking Essay Question:

Using Cross Impact concepts, what would be your approach to resolving the ethical dilemma of what to do about derivative papers? Please limit your answer to no more than 1000 words. 300 words should be adequate.

Selected
Answer:

Fabricating research data is an unethical conduct that any expert has indulged in. Data falsification is an aspect of legal under the law, which may cause the loss of work, custody, and finance. Most individuals all over the world could consider research information prior considering a study. Any discovery that has been further enhanced by scientists is invalidated by research fabrication. The legislation needs to take into account every obvious and non-obvious outcomes of any type of research. Obtaining precise results and real theories ought to be the prime goal of scientific study, and no researcher should undertake measures that might jeopardize his work. The US government doesn't really allow data fabrication; individuals could even be convicted if proven to be scamming the government. Most research studies involve codes of ethics that emphasize integrity. This data fabrication and falsification might have an effect on the study's stakeholders as well. For each of these elements to be eliminated, scientists must be liable for their research and study since it will have an impact on society both favorably and adversely. This commitment can be achieved by promoting consciousness about the fabrication and also its consequences for global community as a whole. Research fabrication became a widespread practice all over the world, and many scientists and researchers had already been convicted of various types of malfeasance. Data fabrication is also induced by research or participants of the study, who may purposefully offer inaccurate data to researchers owing to personal considerations or low morale during the study. Analyzing falsified data and producing true results may be a challenging and time-consuming operation towards the conclusion of any study. Ultimately, enhancing understanding of research fabrication is such way to prevent it and exposing the areas of breach can help to mitigate the effects and hold researchers liable for their work.

Correct
Answer:



1. **Identify ethical, technical, and economic issues and problems**
2. **Identify affected parties (stakeholders) and their rights and responsibilities**
3. **Identify social and political constraints on possible solutions**
4. **Identify additional information that may be needed to make a good, ethical decisions**
5. **Identify alternative courses of action that may be taken to meet objectives.**
6. **Identify possible consequences of alternative actions and decisions**
7. **Evaluate the alternatives according to basic ethical values**

The NSPE Code of Ethics is a good source of ethical issues to address. The primary object should be to protect the health, welfare and safety of the public. Affected parties might include researchers, faculty, academic institutions, funding agencies, government agencies, insurance companies, academic/professional journals, libraries, research corporations, etc. Social and political constraints are significant. Government agencies such as the EPA and FDA may have policies that are derived from research based on papers derived from fraudulent research. Possible courses of action might include creating a cumulative database of papers derived from papers known to be fraudulent. Withdrawing these papers from publication until they are revised is a possible course of action. The consequences of these actions could be far reaching. If stake holders have been harmed directly or indirectly by fraudulent research, the researchers and their parent organizations might become liable to civil lawsuits.

The resolution of what to do about papers derived from fraudulent research is a very complex issue. Possible courses of action will involve trade offs that will not be satisfying to many of the affected parties. Cross Impact Analysis is an approach that can engage the stakeholders in a way that exposes these complexities and helps to reach a consensus on the best way to proceed.

Response
Feedback: Well written. Good recommendations. Thanks Bill Marcy

Question 13

0 out of 4 points



Journals cannot be held ethically responsible for safeguarding the research record and hence they do not play a critical role in dealing with suspected misconduct.

Selected Answer:  True


Answers: True
 False

Question 14

4 out of 4 points



Diederik Stapel, a Dutch social psychologist, was cleared of all allegations of academic fraud that asserted he had made up his research studies.

Selected Answer:  False

Answers: True
 False


Question 15

4 out of 4 points



David Broockman a third-year political-science doctoral student at UC Berkeley, was blown away by some early results published by Michael LaCour, a political-science grad student at UCLA. As a result of a LaCour's statement that \$100 had been paid to survey each of 10,000 participants, an incredible \$1 million, Broockman exposed the survey data of Michael LaCour research as one of the biggest academic research frauds of all time.

Selected Answer:  True

Answers:  True
False

Question 16

3.33333 out of 4 points



Which of the following statements might be used to form a basis for creating a Research Code of Ethics equivalent to the NSPE Code of Ethics? Partial credit is given for correct answers. Negative partial credit is given for incorrect answers. The total score will not be less than zero.

Selected
Answers:

Perform services only in areas of competence.

✓ C.

✓ E.

Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

✓ F.

Issue public statements only in an objective and truthful manner.

Act for each employer or client as faithful agents or trustees.

✓ G.

Hold paramount the safety, health, and welfare of the public.

✓ J.

Answers:

A. Minimize access to data resulting from the research

B.

Avoid publishing research results in a manner the allows easy replication of the research

Perform services only in areas of competence.

✓ C.

D. File for patent protection before publishing research results

✓ E.

Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

✓ F.

Issue public statements only in an objective and truthful manner.

Act for each employer or client as faithful agents or trustees.

✓ G.

Avoid deceptive acts.

✓ H.

I.

Copyright all software developed before publication to maximize future license fees.

Hold paramount the safety, health, and welfare of the public.

✓ J.

Question 17

4 out of 4 points



Scientific misconduct is the violation of the standard codes of scholarly conduct and ethical behavior in professional scientific research.

Selected Answer: ☒ True

Answers: ☒ True
☐ False

Question 18

2 out of 2 points



Ethicana --- Which of the statements below best characterizes the ethics of engineer Unoco in the video Ethicana?

Selected Answer: ☒ C.
Unoco's ethical behavior is ambiguous. At times he acts ethically and at other times he acts unethically.

Answers: ☐ A. Unoco consistently conducts himself as an ethical engineer.
☐ B. Unoco consistently conducts himself as an unethical engineer.
☒ C.
Unoco's ethical behavior is ambiguous. At times he acts ethically and at other times he acts unethically.

Question 19

2 out of 2 points



Ethicana --- The Foreign Corrupt Practices Act applies to US companies dealing with foreign government officials as well as foreign companies that sell their stock on US stock exchanges or have business operations in the United States.

Selected Answer: ☒ True

Answers: ☒ True
☐ False

Question 20

2 out of 2 points



Ethicana ---

When working on an engineering project in a foreign country, there is no ethical difference between making a "grease" payment to a government employee to expedite service and paying a bribe to a high ranking government official to get a contract.

Selected Answer: ☒ False

Answers: ☐ True
☒ False

Question 21

2 out of 2 points



Ethicana --- In the video Ethicana, the term "appreciation" is used in the sense of appreciating the support of highly placed governmental officials for a large project funded by an international agency. Even though the "appreciation" takes the form of diverting project funds into the personal accounts of these officials, this is not considered a bribe.

Selected Answer: ☒ False

Answers: ☐ True

☒ False

Question 22

2 out of 2 points



Ethicana ---

Ethical issues rarely arise in the conduct of ordinary technical and business decision-making in engineering practice.

Selected Answer: ☒ False

Answers: ☐ True

☒ False

Question 23

2 out of 2 points



Codes of Ethics ---

It is ethical for engineers to publicly express technical opinions that are founded upon knowledge of the facts and competence in the subject matter.

Selected Answer: ☒ True

Answers: ☒ True

☐ False

Response
Feedback:

Engineers may express publicly technical opinions that are founded upon knowledge of the facts and competence in the subject matter.

Question 24

2 out of 2 points



Codes of Ethics ---

Engineers are ethically obligated not to solicit nor to accept a contract from a governmental body on which a principal or officer of their organization serves as a member.

Selected Answer: ☒ True

Answers: ☒ True

☐ False

Response
Feedback:

Engineers shall not solicit or accept a contract from a governmental body on which a principal or officer of their organization serves as a member.

Question 25

2 out of 2 points



Codes of Ethics ---

It is ethical for engineers to review, sign and place their engineering seals on engineering documents that are not in conformity with applicable standards.

Selected Answer: ☒ FalseAnswers: ☐ True☒ FalseResponse
Feedback:

Engineers shall approve only those engineering documents that are in conformity with applicable standards.

Question 26

2 out of 2 points



Codes of Ethics ---

While engineers are ethically obligated not to affix their signatures to engineering plans or documents dealing with subject matter for which they lack competence, they may affix their signatures to engineering plans or documents if they have a good faith belief that such plans or documents were competently prepared by another qualified engineer.

Selected Answer: ☒ FalseAnswers: ☐ True☒ FalseResponse
Feedback:

Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control.

Question 27

2 out of 2 points



Codes of Ethics ---

Engineers are ethically obligated not to issue statements, criticisms or arguments on technical matters in which they are competent that are inspired or paid for by interested parties, unless they have prefaced their comments by explicitly disclosing all interested parties on whose behalf they are speaking.

Selected Answer: ☒ True

Answers: ☒ True
☐ False

Response Feedback: Engineers shall issue no statements, criticisms, or arguments on technical matters that are inspired or paid for by interested parties, unless they have prefaced their comments by explicitly identifying the interested parties on whose behalf they are speaking, and by revealing the existence of any interest the engineers may have in the matters.

Question 28

2 out of 2 points



Codes of Ethics ---

Engineers are ethically obligated not to offer, give, solicit or receive, either directly or indirectly, any contribution to influence the award of a contract by a public authority, or which may be reasonably construed by the public as having the effect or intent of influencing the award of a contract. An exception is made if such contribution is made in accordance with applicable federal or state election campaign finance laws and regulations.

Selected Answer: ☒ False

Answers: ☐ True
☒ False

Response Feedback: Engineers shall not solicit or accept financial or other valuable consideration, directly or indirectly, from outside agents in connection with the work for which they are responsible.

Question 29

2 out of 2 points



Codes of Ethics ---

It is ethical for engineers in public service as members, advisors, or employees of a governmental or quasi-governmental body or department to participate in decisions with respect to services solicited or provided by them or their organizations in private or public engineering practice.

Selected Answer: ☒ False

Answers: ☐ True

☒ False

Response
Feedback:

Engineers in public service as members, advisors, or employees of a governmental or quasi-governmental body or department shall not participate in decisions with respect to services solicited or provided by them or their organizations in private or public engineering practice.

Question 30

2 out of 2 points



Codes of Ethics ---

It is unethical for engineers to accept compensation, financial or otherwise, from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed and agreed to by all interested parties.

Selected Answer: ☒ True

Answers: ☒ True

☐ False

Response
Feedback:

Engineers shall not accept compensation, financial or otherwise, from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed and agreed to by all interested parties.

Question 31

2 out of 2 points



Codes of Ethics ---

Engineers are not ethically or legally obligated to follow the provisions of state or federal law when such actions could endanger or compromise their employer's or clients' financial interests.

Selected Answer: ☒ False

Answers: ☐ True

☒ False

Response
Feedback:

Engineers are ethically obligated to conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

Question 32

2 out of 2 points



Codes of Ethics ---

Engineers are ethically obligated to acknowledge their errors only after consulting with their employers or clients and only if their clients and employers give their approval.

Selected Answer: ☒ False

Answers: ☐ True

☒ False

Response
Feedback:

Engineers shall acknowledge their errors and shall not distort or alter the facts.

Thursday, December 15, 2022 12:29:23 PM CST

← OK