Best Practices for Writing Multiple-Choice Questions

General:
- Focus each question on important knowledge and/or skills (content and performance). Do not ask questions about small details or irrelevant aspects of the content.
- For statistical validity, it is important to have no less than three (5 is ideal) questions tied to each course learning outcome.
- Each question needs to be linked to one or two course learning outcomes (1 learning outcome per question is preferred). If you can’t relate a question directly to at least 1 of the learning outcomes, rewrite it or throw it out.
- We assess program outcomes and MOs through their alignment to course outcomes, as demonstrated by the course map on the master course syllabus. Therefore, course outcomes, as opposed to MOs or program outcomes, are primarily tied to multiple-choice questions. However, for the assessment of General Education courses, in which specific skills that are not necessarily reflected in the course outcomes must be assessed, MOs can be directly connected to multiple-choice questions.
- There shouldn’t be more than 5 alternatives per multiple-choice question (a, b, c, d, e, for example).
- There shouldn’t be more than 100 questions on the assignment.
- Make all questions independent of each other. Avoid situations where students need to get one question correct in order to be able to find the answer to the following question.

For Stems:
- If possible, write the stem as a direct question (this is easier to write and easier for students to read).
- If an incomplete sentence is used (instead of direct question) put the missing information towards the end rather than in the middle of the sentence (again, this is easier to read for students).
- Write questions with a simple sentence structure and avoid needlessly difficult vocabulary.
- In questions that assess definitions, place the word or term in the stem and use definitions or descriptions as alternatives.
- The stem should make sense before you have read the alternatives.
- Don’t use negatively worded items if possible. This often confuses students, or they overlook the negative word.
- Don’t copy your question straight out of the textbook.

Keys
- Have only one correct or best answer to a multiple-choice item (for validity reasons).
- Make sure that all instructors can agree on which alternative is the key.
- Make sure that the answer is a grammatically correct response to the stem.
- Make the key and distractors of approximately the same length.
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- Don’t use patterned responses (AABBCDDAA...).
- Don’t copy your statement straight out of the textbook.

Alternatives/Distractors

- Strive for creating 3-5 good alternatives for each question.
- Avoid silly distractors a student can instantly eliminate based on common sense.
- If possible, use common student misconceptions for distractors.
- Each of the distractors should be a grammatically correct response to the stem.
- Avoid clues to the answer. For example, statements with the words always, never, all, every, none, ... are usually false.
- Avoid using vague adjectives and adverbs. Words such as frequent, a few, some, typically, ... are interpreted differently by different people.
- Put all alternatives below each other, i.e. only 1 column.
- Arrange the alternatives in a logical or meaningful order, i.e. numerically, chronological sequence, size of objects (L, M, S or S, M, L), or alphabetically if no order exists among the items.
- Don’t use “all of the above” or “none of the above” (they are bad for validity).
- Don’t copy your statements straight out of the textbook.

To maintain consistency, all Multiple-Choice Exams and Answer Keys should be saved using the following file name template:

Course_Name of Assessment_Type of Document_Draft/Final_Semester & Year

For example: EGL1010_LibraryFinalExam_AnswerKey_Final_FA14

For more information on how to obtain an electronic key for your exam and on how to process and store the data, please refer to the “Guidelines for Multiple Choice Assessments” document on the portal.

On the next page you can find a checklist you can use to make sure you avoided the most common pitfalls of writing multiple-choice items.
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CHECKLIST FOR MULTIPLE-CHOICE ITEMS

After creating your multiple-choice items use this checklist. If you answer no to any of these questions you may want to revise the item(s)

1. Does the item assess an important aspect of the course material?
2. Are questions about the most important concepts or more difficult aspects of the material worth more points than less important/easier aspects?
3. Does the stem ask a direct question?
4. Is the item paraphrased rather than copied directly from a textbook?
5. Are the vocabulary and sentence structure at a relatively low and non-technical level?
6. Did you avoid too easy or silly distractors?
7. If possible, is every incorrect alternative based on a common student error or misconception?
8. Is the correct answer to this item independent of the correct answers of other items?
9. Did you avoid using “all/none of the above,” “always, never, ...”, and “a few, some, ...” as much as possible?
10. Is there only one correct or best answer to the stem?
11. Are the alternatives ordered in a meaningful way?
12. Did you avoid patterned keys?