



# Photography

## Study Guide

**Assessment:**  
**4115 Photographer**

Aligned with the Professional  
Photographers of America, Inc.



Endorsed by the Professional  
Photographers of Oklahoma

PHOTO  OK

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**Testing**  
*The Provider of Online Testing Solutions*



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## Overview

This study guide is designed to help students prepare for the Photographer assessment. It not only includes information about the assessment, but also the skills standards upon which the assessment is based and test taking strategies.

Each of the four sections in this guide provides useful information for students preparing for the Photographer assessment.

- CareerTech and Competency-Based Education: A Winning Combination
- Photographer assessment
  - ▶ Assessment Information
  - ▶ Standards and Test Content
  - ▶ Sample Questions
  - ▶ Textbook/Curriculum Crosswalk
  - ▶ Abbreviations, Symbols, and Acronyms
- Strategies for Test Taking Success
- Notes

This assessment measures a student's ability to apply knowledge of the skills necessary for success in the photography sector. This assessment is aligned with the Professional Photographers of America, Inc. (PPA) and endorsed by the Professional Photographers of Oklahoma (PPO).

The PPA is recognized as an international forum for photographic activity, education, information, and professional standards. Information about the PPA can be accessed at [www.ppa.com](http://www.ppa.com).

The PPO is dedicated to the advancement of photography through education, marketing and business. Information about the PPO is available at [www.photoxok.org](http://www.photoxok.org).

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## CareerTech and Competency-Based Education: A Winning Combination

Competency-based education uses learning outcomes that emphasize both the application and creation of knowledge and the mastery of skills critical for success. In a competency-based education system, students advance upon mastery of competencies, which are measurable, transferable outcomes that empower students.

Career and technology education uses industry professionals and certification standards to identify the knowledge and skills needed to master an occupation. This input provides the foundation for development of curriculum, assessments and other instructional materials needed to prepare students for wealth-generating occupations and produce comprehensively trained, highly skilled employees demanded by the work force.

### Tools for Success

CareerTech education relies on three basic instructional components to deliver competency-based instruction: skills standards, curriculum materials, and competency assessments.

**Skills standards** provide the foundation for competency-based instruction and outline the knowledge and skills that must be mastered in order to perform related jobs within an industry. Skills standards are aligned with national skills standards and/or industry certification requirements; therefore, a student trained to the skills standards is equally employable in local, state and national job markets.

**Curriculum materials and textbooks** contain information and activities that teach students the knowledge and skills outlined in the skills standards. In addition to complementing classroom instruction, curriculum resources include supplemental activities that enhance learning by providing opportunities to apply knowledge and demonstrate skills.

**Certification Assessments** test the student over material outlined in the skills standards and taught using the curriculum materials and textbooks. When used with classroom performance evaluations, certification assessments provide a means of measuring occupational readiness.

Each of these components satisfies a unique purpose in competency-based education and reinforces the knowledge and skills students need to gain employment and succeed on the job.

### Measuring Success

Evaluation is an important component of competency-based education. Pre-training assessments measure the student's existing knowledge prior to receiving instruction and ensure the student's training builds upon this knowledge base. Formative assessments administered throughout the training process provide a means of continuously monitoring the student's progress towards mastery.

Certification assessments provide a means of evaluating the student's mastery of knowledge and skills. Coaching reports communicate assessment scores to students and provide a breakdown of assessment results by standard area. The coaching report also shows how well the student has mastered skills needed to perform major job functions and identifies areas of job responsibility that may require additional instruction and/or training.

# Photographer Assessment Information

## What is the Photographer assessment?

The Photographer assessment is an end-of-program assessment for students in a Photography program. The assessment provides an indication of student mastery of knowledge and concepts necessary for success in the photography field.

## How was the assessment developed?

The assessment was developed by the CareerTech Testing Center. The assessment and standards align with the Professional Photographers of America, Inc.'s standards and are endorsed by the Professional Photographers of Oklahoma. Items were developed and reviewed by a committee of subject matter experts.

**Frequency:** represents how often the task is performed on the job. Frequency rating scales vary for different occupations. The rating scale used in this publication is presented below:

1 = less than once a week      2 = at least once a week      3 = once or more a day

**Criticality:** denotes the level of consequence associated with performing a task incorrectly. The rating scale used in this publication is presented below:

1 = slight                                      2 = moderate                                      3 = extreme

## What does the assessment cover?

Specifically, the tests includes multiple-choice test items over the following areas:

### Photographer (55 questions)

Camera, Lenses and Attachments	15%
Composition and Design	15%
Digital Post Production	18%
Exposure and Meters	10%
Film, Digital Capture, and Output	13%
Lighting	29%

## What is the benefit of using the assessment?

Students receive a certificate for each assessment that he/she passes. This certificate may be included in his/her portfolio and used to communicate the student's mastery of the subject matter to potential employers.

## When should the assessment be taken?

The CareerTech Testing Center recommends that students take the assessments as soon as possible after receiving all standards-related instruction, rather than waiting until the end of the school year.

## Is the assessment timed?


No. However, most students finish the assessment within one hour.

## What resources can students use on the assessment?

Students are allowed to use calculators and scratch paper on CTTC assessments; however, these items must be provided by the testing proctor and returned to the proctor before the student's exam is submitted for scoring. Calculator apps on cell phones and other devices may not be used on these assessments.

## What accommodations can be made for students with Individualized Education Plans (IEPs)?

Accommodations are allowed for students with an Individualized Education Plan. Examples of allowable accommodations include:

- Extended time — This assessment is not timed; therefore, students may take as much time as needed to finish. The assessment must be completed in one testing session.
- Readers — A reader may be used to read the assessment to a student who has been identified as needing this accommodation.
- Enlarged text — Students needing this accommodation can activate this feature by clicking the  icon in the upper right corner of the screen.

## What can students expect on Test Day?

All CTTC assessments are web-based and delivered exclusively by a proctor in the school's assessment center. The proctor **cannot** be an instructor or anyone who was involved with the student during instruction.

Assessments are delivered in a question-by-question format. When a question is presented, the student can select a response or leave the question unanswered and advance to the next question. Student may also flag questions to revisit before the test is scored. All questions must be answered before the test can be submitted for scoring.

After the assessment is scored, the student will receive a score report that not only shows the student's score on the assessment, but also how the student performed in each standard area.

## Can students retake the test?

Students may retake the test unless their school or state testing policies prohibit retesting. Students who can retest must wait at least three days between test attempts.



# Standards and Test Content

## Photographer

### Camera, Lenses, and Attachments (8 questions)

1. Select the appropriate camera for subject matter and output requirements **(3/3)**
2. Select the appropriate lens based upon size and distance of subject matter as well as the desired perspective **(3/3)**
3. Use camera, camera menu settings, and camera supports to create a quality image **(3/3)**
4. Select and use the appropriate lens attachment **(2/2)**



### Composition and Design (8 questions)

1. Determine the best color relationship to complement subject(s) to achieve the desired effects **(2/2)**
2. Analyze the environment to complement subject(s) to achieve the desired effects **(3/2)**
3. Frame or crop the picture within the camera's viewfinder **(3/1)**
4. Use angle of view to produce the desired effect (mood, power, size, strength, etc.) **(3/2)**
5. Position and pose subject(s) with selected background, special effects, and props to achieve the desired effect **(3/3)**

### Digital Post Production (10 questions)

1. Determine the best color space in which to work **(3/3)**
2. Select the appropriate file format **(3/2)**
3. Create/employ a color management system **(3/3)**
4. Select the appropriate file management and archival systems **(3/3)**
5. Manipulate digital images **(2/2)**

### Exposure and Meters (6 questions)

1. Employ a light meter properly to achieve desired exposures **(3/3)**
2. Set f/stops and shutter speed based upon exposure and desired effects **(3/3)**
3. Verify proper exposure **(3/3)**

## Film, Digital Capture, and Output (7 questions)

1. Considering lighting conditions, select the type of film based upon the final product needed (e.g. black and white, color, transparency, etc.) and desired result **(3/3)**
2. Select the appropriate capture media for subject matter, format requirements, and final job requirements **(3/3)**
3. Identify and correct problems in images **(2/2)**
4. Output/Print image to desired medium **(2/2)**

## Lighting (16 questions)

1. Evaluate the source(s) of light at the location where subject(s) will be photographed to determine the tools necessary to complete the assignment **(3/3)**
2. Determine the lighting ratio **(3/3)**
3. Understand light modifiers (gobos, gels, spots, flags, etc.) and their uses **(3/2)**
4. Determine the type of lighting design (Rembrandt, split, broad, short, etc.) to be used with the given subject(s) **(3/3)**
5. Determine the appropriate lighting usage (main, fill, etc.) for subject(s) **(3/3)**
6. Understand the theory of light **(3/3)**
7. Select the appropriate filter for color correction of the light source **(3/3)**
8. Use lighting techniques as composition and design elements **(3/3)**



## Sample Questions

- \_\_\_\_\_ 1. What type of lens is normally recommended for shooting sports?
- extreme wide angle
  - normal
  - telephoto
  - wide angle
- \_\_\_\_\_ 2. What is considered the normal focal length range for wide angle lenses for 35mm equivalent cameras?
- less than 21 mm
  - 21-35mm
  - 35-50 mm
  - 50-135mm
- \_\_\_\_\_ 3. What can be used to capture true colors and attain accurate white balance?
- AWB mode
  - daylight format
  - RAW format
  - tungsten mode
- \_\_\_\_\_ 4. A photographer is shooting photographs in a dimly lit room with a 35mm film camera that has a flash. He is using color film with an ISO of 100 and needs a print that is 8"x10" in size. What print quality can the photographer expect?
- overexposed with very coarse grain
  - properly exposed with coarse grain
  - properly exposed with relatively fine grain
  - underexposed with fine grain
- \_\_\_\_\_ 5. As a general rule, to reduce blurring from camera shake when shooting with a 200mm lens, the shutter speed should be set on at least \_\_\_\_\_.
- 1/60
  - 1/100
  - 1/125
  - 1/250.
- \_\_\_\_\_ 6. A common problem in the photography of fast-moving objects or people in motion is \_\_\_\_\_.
- flash delay
  - image sensor lag
  - shutter lag
  - zoom delay



- \_\_\_\_\_ 7. In digital photography, ISO \_\_\_\_\_.
- a. measures internal sensitivity operations
  - b. measures the image sensor's sensitivity
  - c. represents manufacturing standards
  - d. represents the speed of the shutter release
- \_\_\_\_\_ 8. What is the term generally used instead of grain when discussing digital photography and printing?
- a. debris
  - b. movement
  - c. noise
  - d. sand
- \_\_\_\_\_ 9. Which ISO provides crisp shots and is considered ideal in digital photography?
- a. 100
  - b. 200
  - c. 400
  - d. 800
- \_\_\_\_\_ 10. On a histogram, what term is used when overexposure or underexposure runs off the edge of the graph?
- a. clipping
  - b. dipping
  - c. floating
  - d. hanging



## Sample Questions — Key

1. What type of lens is normally recommended for shooting sports?
  - a. extreme wide angle      Wrong, but plausible
  - b. normal      Wrong, but plausible
  - c. telephoto      Correct
  - d. wide angle      Wrong, but plausible
  
2. What is considered the normal focal length range for wide angle lenses for 35mm equivalent cameras?
  - a. less than 21 mm      Wrong, but plausible
  - b. 21-35mm      Correct
  - c. 35-50 mm      Wrong, but plausible
  - d. 50-135mm      Wrong, but plausible
  
3. What can be used to capture true colors and attain accurate white balance?
  - a. WB mode      Wrong, but plausible
  - b. daylight format      Wrong, but plausible
  - c. RAW format      Correct
  - d. tungsten mode      Wrong, but plausible
  
4. A photographer is shooting photographs in a dimly lit room with a 35mm film camera that has a flash. He is using color film with an ISO of 100 and needs a print that is 8"x10" in size. What print quality can the photographer expect?
  - a. overexposed with very coarse grain      Wrong, but plausible
  - b. properly exposed with coarse grain      Wrong, but plausible
  - c. properly exposed with relatively fine grain      Correct
  - d. underexposed with fine grain      Wrong, but plausible
  
5. As a general rule, to reduce blurring from camera shake when shooting with a 200mm lens, the shutter speed should be set on at least \_\_\_\_\_.
  - a. 1/60      Wrong, but plausible
  - b. 1/100      Wrong, but plausible
  - c. 1/125      Wrong, but plausible
  - d. 1/250      Correct
  
6. A common problem in the photography of fast-moving objects or people in motion is \_\_\_\_\_.
  - a. flash delay      Wrong, but plausible
  - b. image sensor lag      Wrong, but plausible
  - c. shutter lag      Correct
  - d. zoom delay      Wrong, but plausible

7. In digital photography, ISO \_\_\_\_\_.

- a. measures internal sensitivity operations Wrong, but plausible
- b. measures the image sensor's sensitivity Correct
- c. represents manufacturing standards Wrong, but plausible
- d. represents the speed of the shutter release Wrong, but plausible

8. What is the term generally used instead of grain when discussing digital photography and printing?

- a. debris Wrong, but plausible
- b. movement Wrong, but plausible
- c. noise Correct
- d. sand Wrong, but plausible

9. Which ISO provides crisp shots and is considered normal in digital photography?

- a. 100 Correct
- b. 200 Wrong, but plausible
- c. 400 Wrong, but plausible
- d. 800 Wrong, but plausible

10. On a histogram, what term is used when overexposure or underexposure runs off the edge of the graph?

- a. clipping Correct
- b. dipping Wrong, but plausible
- c. floating Wrong, but plausible
- d. hanging Wrong, but plausible

## Curricula Crosswalk

### Crosswalk to Core Resource Materials for the CPP Exam

The following crosswalk is intended for guidance purposes only. It is not representative of all curriculum or resource materials that may be used for photography programs. It is intended as a reference material for curriculum planning and mapping of the standards to available curriculum.

#### Curriculum/Resource Titles:

- 1) Photography. 11th Edition. 2013. London, Stone & Upton.
- 2) Complete Digital Photography. 8<sup>th</sup> Edition. 2014. Long.
- 3) Light and Lens: Photography in the Digital Age. 2011. Hirsch.
- 4) Portrait Photography Handbook. 2007. Zucker.

Module Name — Objective	Chapter
<b>Camera, Lenses, and Attachments</b>	1) Chapter 1, 2, 3 2) Chapter 1, 2, 3, 5, 7 3) Chapter 1, 2, 3 4) Chapter 10
1. Select the appropriate camera for subject matter and output requirements	1) Chapter 1, 2 2) Chapter 1, 2 3) Chapter 1, 3 4) Chapter 10
2. Select the appropriate lens based upon size and distance of subject matter as well as the desired perspective	1) Chapter 1, 3 2) Chapter 1, 2, 3 3) Chapter 3 4) Chapter 10
3. Use camera, camera menu settings, and camera supports to create a quality image	1) Chapter 1 2) Chapter 1, 3, 5, 7 3) Chapter 2 4) Chapter 11
4. Select and use the appropriate lens attachment	1) Chapter 3 2) Chapter 1, 2, 3 3) Chapter 3 4) Chapter 10
<b>Composition and Design</b>	1) Chapter 1, 5 2) Chapter 4, 5, 9, 11, 12 3) Chapter 6, 7 4) Chapter 1, 2, 3, 4, 5, 11
1. Determine the best color relationship to complement subject(s) to achieve the desired effects	1) Chapter 1, 5 2) Chapter 9 3) Chapter 6, 7 4) Chapter 1

<b>Module Name — Objective</b>	<b>Chapter</b>
2. Analyze the environment to complement subject(s) to achieve the desired effects	1) Chapter 1, 5 2) Chapter 9, 11, 12 3) Chapter 6, 7 4) Chapter 2
3. Frame or crop the picture within the camera's viewfinder	1) Chapter 1, 5 2) Chapter 4, 5 3) Chapter 6, 7 4) Chapter 11
4. Use angle of view to produce the desired effect (mood, power, size, strength, etc.)	1) Chapter 1, 5 2) Chapter 11, 12 3) Chapter 6, 7 4) Chapter 11
5. Position and pose subject(s) with selected background, special effects, and props to achieve the desired effect	1) Chapter 1, 5 2) Chapter 12 3) Chapter 6, 7 4) Chapter 2, 3, 4, 5
<b>Digital Post Production</b>	1) Chapter 6, 7, 9 2) Chapter 13, 14, 15, 16 3) Chapter 6, 7
1. Determine the best color space in which to work	1) Chapter 6 2) Chapter 13, 14 3) Chapter 9
2. Select the appropriate file format	1) Chapter 6 2) Chapter 14 3) Chapter 9
3. Create/employ a color management system	1) Chapter 6 2) Chapter 15, 16 3) Chapter 9
4. Select the appropriate file management and archival systems	1) Chapter 9 2) Chapter 13 3) Chapter 9
5. Manipulate digital images	1) Chapter 7 2) Chapter 15, 16 3) Chapter 9
<b>Exposure and Meters</b>	1) Chapter 4 2) Chapter 6, 8 3) Chapter 4 4) Chapter 12
1. Employ a light meter properly to achieve desired exposures	1) Chapter 4 2) Chapter 6, 8 3) Chapter 4 4) Chapter 12

<b>Module Name — Objective</b>	<b>Chapter</b>
2. Set f/stops and shutter speed based upon exposure and desired effects	1) Chapter 4 2) Chapter 6, 8 3) Chapter 4 4) Chapter 12
3. Verify proper exposure	1) Chapter 4 2) Chapter 6, 8 3) Chapter 4 4) Chapter 12
<b>Film, Digital Capture, and Output</b>	1) Chapter 7, 8, 10 2) Chapter 17, 18, 19, 20, 21, 22 3) Chapter 8 4) Chapter 13
1. Considering lighting conditions, select the type of film based upon the final product needed (e.g. black and white, color, transparency, etc.) and desired result	1) Chapter 7 2) Chapter 17, 18, 19 3) Chapter 8 4) Chapter 13
2. Select the appropriate capture media for subject matter, format requirements, and final job requirements	1) Chapter 7 2) Chapter 20, 21 3) Chapter 8 4) Chapter 13
3. Identify and correct problems in images	1) Chapter 7 2) Chapter 17 3) Chapter 8 4) Chapter 13
4. Output/Print image to desired medium	1) Chapter 8, 10 2) Chapter 22 3) Chapter 8 4) Chapter 13
<b>Lighting</b>	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9
1. Evaluate the source(s) of light at the location where subject(s) will be photographed to determine the tools necessary to complete the assignment	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9
2. Determine the lighting ratio	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9
3. Understand light modifiers (gobos, gels, spots, flags, etc.) and their uses	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9

<b>Module Name — Objective</b>	<b>Chapter</b>
4. Determine the type of lighting design (Rembrandt, split, broad, short, etc.) to be used with the given subject(s)	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9
5. Determine the appropriate lighting usage (main, fill, etc.) for subject(s)	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9
6. Understand the theory of light	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9
7. Select the appropriate filter for color correction of the light source	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9
8. Use lighting techniques as composition and design elements	1) Chapter 11 2) Chapter 10 3) Chapter 5 4) Chapter 6, 7, 8, 9

## Abbreviations, Symbols and Acronyms

The following is a list of abbreviations, symbols, and acronyms used in the Photography study guide and on the Photographer assessment.

AWB	Auto White Balance
CYMK	Cyan, Yellow, Magenta, Black
EPS	Encapsulated PostScript
f/N	Focal Ratio Number
GIF	Graphics Interchange Format
ISO	International Standards Organization
JPEG	Joint Photographic Experts Group
mm	Millimeter
PDF	Portable Document Format
PNG	Portable Network Graphics
PSD	Photoshop Document
RAW	Read And Write
RGB	Red, Green, Blue
SLR	Single Lens Reflex
TIFF	Tagged Image File Format



## Test Taking Strategies

This section of the study guide contains valuable information for testing success and provides a common-sense approach for preparing for and performing well on any test.

### General Testing Advice

1. Get a good night's rest the night before the test — eight hours of sleep is recommended.
2. Avoid junk food and “eat right” several days before the test.
3. Do not drink a lot or eat a large meal prior to testing.
4. Be confident in your knowledge and skills!
5. Relax and try to ignore distractions during the test.
6. Focus on the task at hand — taking the test and doing your best!
7. Listen carefully to the instructions provided by the exam proctor. If the instructions are not clear, ask for clarification.

### Testing Tips

1. Read the entire question before attempting to answer it.
2. Try to answer the question before reading the choices. Then, read the choices to determine if one matches, or is similar, to your answer.
3. Do not change your answer unless you misread the question or are certain that your first answer is in.
4. Answer questions you know first, so you can spend additional time on the more difficult questions.
5. Check to make sure you have answered every question before you submit the assessment for scoring — unanswered questions are marked in.



