SPIE Course Proposal Instructions + Template

Thank you for your interest in teaching a course for SPIE. This document includes instructions for preparing and submitting your proposed course for consideration at an SPIE event(s). Review the instructions carefully before submitting your proposal to courses@spie.org. Incomplete submissions will not be considered.

Please read the Instructor Information prior to submitting your course description, to help you understand the process and requirements: https://spie.org/education/spie-instructors

A complete course proposal submission will include:
1. A well written course description following the specific format outlined in this document (template and example course description provided)
2. Your CV, including teaching experience
3. In your email to SPIE, state which SPIE event(s) you are interested in teaching.
4. SPIE Education Services requires that you read and agree to the terms in the Instructor Information prior to submitting your course proposal: https://spie.org/education/spie-instructors. Be sure to read the information links under More information and Requirements at the bottom of the webpage. Sign the terms of agreement at the end of the Course Proposal Template.

COPY AND PASTE THE COURSE PROPOSAL TEMPLATE INTO WORD FOR WRITING YOUR DESCRIPTION. AN EXAMPLE OF A SUCCESSFUL COURSE DESCRIPTION IS INCLUDED ON PAGE 3.

BEGIN COURSE PROPOSAL TEMPLATE

COURSE TITLE
The course title must be interesting to the potential student. The title should reflect the core course content. Titles limited to 1-7 words are highly encouraged for promotional appeal.

NEEDS ANALYSIS
Explanation of why there is a need for this course to our community. This section is for SPIE only. If selected, the needs analysis will not be included with your course description.

DESCRIPTION
A short (1-2 paragraph) abstract of the course contents, detailing items such as an overview of the course topic, the problems it can solve, and examples of applications for the technology or approach. Keep the description in the active voice and remember that the audience is typically composed of professional engineers rather than researchers. A clear, engaging, and well-written description can make a real difference in the success of your course.

LEARNING OUTCOMES
Each course should have 3 to 8 learning outcomes. Learning outcomes are written statements that describe what the student should be able to do at the conclusion of the presentation. Each objective should be measurable and specific. For example, the student will be able to "List and compare the basic
benefits of fiber optic sensor technology." Each statement MUST contain an action verb – do not use "understand" or “know” to lead off items, as it is not a measurable outcome. See the Bloom’s Taxonomy of Verbs Chart as a guide for preparing the learning outcomes:

INTENDED AUDIENCE
The intended audience should be described in terms of job function or title as well as any education or work experience prerequisites. Limit to 1-2 complete sentences.

COURSE LEVEL
Indicate if the material content is Introductory, Intermediate or Advanced. Please note that we are not able to accommodate 'split' level designations such as "Introductory/Intermediate" or "Intermediate/Advanced".

COURSE LENGTH
Indicate whether you think a 2 hour, half-day (3.5 hours of instruction), or a full day (6.5 hours) will be needed to cover the course content.

BIOGRAPHY
Instructor's bio should be 2 -3 sentences that indicate that the instructor is qualified to present a course on the material and establish credibility as a teacher. Include current or most recent positions, current degree held, not full work history.

NOTES
If applicable, include any special materials such as a separate SPIE-published textbook to be included with your course. SPIE published books will be in eBook .pdf. Non-SPIE textbooks may not be bundled with courses. It is not necessary to specify the course materials (printout of the presentation slides.)

INTERNET
Internet is not readily available in most course rooms. We will need to know if your course requires Internet access for instructors and/or attendees.

Terms of Agreement
[ ] I confirm that I have read and agree to the instructor requirements as outlined https://spie.org/education/spie-instructors and the pages that follow.

Your Name_______________________________ Date_________________________

END TEMPLATE
EXAMPLE COURSE DESCRIPTION
Radiometry Revealed

This course explains basic principles and applications of radiometry and photometry. A primary goal of the course is to reveal the logic, systematic order, and methodology behind what sometimes appears to be a confusing branch of optical science and engineering. Examples are taken from the ultraviolet through the long-wave infrared portions of the electromagnetic spectrum. Anyone who wants to answer questions such as, "how many watts or photons do I have?" or "how much light or radiation do I need?" will benefit from taking this course.

LEARNING OUTCOMES - Each course should have 3 to 8 learning outcomes. Each statement MUST contain an action verb – do not use "understand" or "know" to lead off items, as it is not a measurable outcome.

This course will enable you to:
1. describe the fundamental units and quantities used to quantify electromagnetic radiation at wavelengths ranging from ultraviolet, through the visible, to infrared
2. use and convert between radiometric and photometric quantities
3. calculate areas and solid angles to determine the energy, energy density, or brightness in an optical measurement or system
4. explain the role of rays, stops, and pupils in defining the field of view and light-gathering capability of an optical system
5. determine the throughput of an optical system and use it in radiometric calculations
6. quantify the radiant energy in optical images from point and extended sources
7. transfer radiant energy into and throughout optical systems
8. identify radiometric standards and calibration methods

INTENDED AUDIENCE
Scientists, engineers, technicians, or managers who wish to learn more about how to quantify radiant energy in optical systems and measurements. Undergraduate training in engineering or science is assumed.

COURSE LEVEL
Introductory

COURSE LENGTH
Half-day (3.5 hours)

INSTRUCTOR Instructor's bio should be 2 -3 sentences that indicate that the instructor is qualified to present a course on the material and establish credibility as a teacher. Include current or most recent positions, current degree held, not full work history.

Joseph A. Shaw has been developing optical remote sensing systems and using them in environmental and military sensing for two decades, first at NOAA and currently as professor of electrical engineering and physics at Montana State University. Recognition for his work in this field includes NOAA research awards, a Presidential Early Career Award for Scientists and Engineers, and the World Meteorological Organization's Vaisala Prize. He earned a Ph.D. in Optical Sciences at the University of Arizona. Dr. Shaw is a Fellow of both the OSA and SPIE.