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# CPET CERTIFICATE OF PRACTICE IN UNIVERSITY TEACHING

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The certificate of practice is a new program offered through CPET (the Caltech Project for Effective Teaching) and CTLO (Center for Teaching, Learning, and Outreach)\*. This program is intended for Caltech graduate students and postdoctoral scholars who are interested in developing their teaching skills with the feedback and guidance of the CTLO and CPET. If you are interested in participating in this Certificate Program, please contact us at [cpet@caltech.edu](mailto:cpet@caltech.edu). Please note that you do not have to complete the Certificate of Interest program before participation in the Certificate of Practice.

The Certificate of Practice program seeks to achieve three major outcomes for participants:

- (1) Synthesis and application of effective methods for teaching and learning
- (2) Assessment and implementation of a teaching philosophy
- (3) Refinement of pedagogy through feedback and self-evaluation.

Participants first investigate approaches to teaching in STEM through classroom instruction or independent study with group discussion. Subsequently, they apply this knowledge in a teaching environment and refine their teaching practice through evaluation, feedback, and self-reflection. Throughout this process, peer leaders suggest useful programming, facilitate discussion among participants and with experienced educators, and review participant progress.

Participants in this program progress through several phases as outlined below:

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## Phase 1 : Plan

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**Plan** a program to develop your teaching skills. Your plan should answer the following questions:

- What are the desired goals from participating in this program?
- In which activities will I participate to achieve these outcomes?

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\* As this is a new and developing program, there may be slight changes to the Certificate requirements over time. We welcome feedback from participants on any changes that we make, or additional changes that they think would benefit the program.

This phase is documented by completing the “Certificate Plan” form, which can be located online at <https://www.teachlearn.caltech.edu/cpet/teachingcertificate/practice>. This document may be developed in collaboration with CPET. Your goals and plans may change over time, and the document is meant to serve as a guide rather than a stringent curriculum. This document must be completed and returned to [cpet@caltech.edu](mailto:cpet@caltech.edu) within 2 weeks of your initial meeting with the CPET co-directors.

## Phase 2 : Learn

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**Learn** about approaches to teaching and factors influencing student outcomes by participating in a class or by developing your own learning program to address your interests. Some recommended learning experiences are:

- Participate in the course, E110: Principles of University Teaching in STEM (as an enrolled student, or as an auditor if you are a postdoc)
- **OR** Participate in an approved online course (please contact [cpet@caltech.edu](mailto:cpet@caltech.edu) to see what is available)
- **OR** Implement a program of independent study that seeks to address goals or areas of interest outlined in your initial planning. **This program must be approved by CPET and CTLO.** Resources that may be incorporated into your program may include:
  - Webinars or courses offered through the Center for the Integration of Research, Teaching, and Learning (CIRTL, <http://www.cirtl.net/>)
  - Discipline-specific conference workshops
  - Programming offered through the Caltech Center for Diversity
  - Workshops and other programming offered by CTLO
  - CPET Seminars and Workshops
  - CPET library collection (<http://libguides.caltech.edu/cpet>)
  - Primary literature sources

Discussion groups for independent study are encouraged and will be organized by CPET upon request.

This phase is documented by completing the “Learning Experience” form, which can be located online at <https://www.teachlearn.caltech.edu/cpet/teachingcertificate/practice>. This document should be completed and submitted to [cpet@caltech.edu](mailto:cpet@caltech.edu) within 2 weeks of the completion of the learning experience.

## Phase 3 : Apply

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**Apply** what you learned in the previous phase in teaching environments. Different participants may wish to fulfill the **Apply** requirements in different ways; therefore the **Apply** portion of the certificate is standardized using a general points system. Each participant must complete 20-points of **Apply** experiences. Some examples of potential **Apply** experiences (and their general point value) are:

- **Serve as a TA** (*10 points per quarter*) and develop your instructional practice throughout the quarter (with discussion and advising by CPET and CTLO).
  - **Guest Lecture** (*2 points per lecture*) and develop, practice, and refine a course lesson through workshops and/or discussions with CPET and CTLO.
  - **Develop and Lead a Workshop/Session** (*2 points*) at the annual Caltech teaching conference.
  - **K-12 Guest Lecturing and Outreach** (*points vary*) through CTLO to develop teaching skills.
  - Other activities that demonstrate application of your teaching philosophy are also encouraged and may be implemented with CPET approval.
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- ❖ Please note that the above points are general guidelines—these numbers may increase or decrease depending on the details of a specific experience. For instance, a teaching assistantship that involves a recitation and the creation of recitation materials may be worth 10 points, while a teaching assistantship that involves only grading may be worth fewer points.
  - ❖ Please note that it is key that these teaching experiences involve thoughtful application of educational pedagogy and best practices. For instance, a guest lecture in which the participant receives slides (from a professor) and is responsible for presenting those slides as-is may receive fewer points.
  - ❖ We encourage students to complete at least 50% of the **Apply** requirements at the postsecondary education level

This phase is documented in two forms located online at

<https://www.teachlearn.caltech.edu/cpet/teachingcertificate/practice>. A “Teaching Experience Description” form should be completed before each teaching experience start date. A “Teaching Experience Reflection” form must be completed within 2 weeks of your teaching experience end date. These documents should be completed and submitted to [cpet@caltech.edu](mailto:cpet@caltech.edu).

Please note that each experience should be documented separately. For example, each quarter of TA-ing counts as one experience, recurrent outreach through a single program counts as one experience, and planning a lesson or a series of related lessons counts as one experience.

## **Phase 4 : Reflect and Refine**

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**Reflect** on and **Refine** your teaching through evaluation and feedback. This portion can be conducted in conjunction with the **Apply** portion. Some potential **Reflect and Refine** experiences are:

- Implement a course assessment strategy that utilizes student feedback or other resources to make improvements in a course.
  - Receive feedback on teaching through a review of a classroom session by members of CPET or CTLO. Document how this review is utilized to improve your teaching.
  - Receive feedback on teaching from a master teacher that will advise and direct your development as an educator and review your classroom sessions.
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- ❖ Feedback must be incorporated into *at least* one teaching experience, but some form of feedback is recommended for all experiences.
  - ❖ We recommend feedback be solicited in the middle of a long-term experience (such as TA-ing or other recurrent experiences) such that the feedback can be assessed and implemented by the participant.

This phase is documented by completing the “Feedback Reflection” form, which can be located online at <https://www.teachlearn.caltech.edu/cpet/teachingcertificate/practice>. This document should be completed and submitted to [cpet@caltech.edu](mailto:cpet@caltech.edu) within 2 weeks of receiving feedback.

## **Phase 5 : Record**

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**Phase 5: Record** the development of your teaching pedagogy and practice through a teaching portfolio, incorporating a teaching philosophy and representative documents from teaching. This document should be developed throughout the certificate program and completed within three months of the completion of phases 1 through 4. Once complete, the portfolio can be submitted to CPET.

Guidelines for creating a teaching portfolio and a teaching statement, including a general description, necessary components, and organization, can be found online at <https://www.teachlearn.caltech.edu/cpet/teachingcertificate/practice>.

## **Acknowledgement of Participation**

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Participants who complete the Certificate of Practice in University Teaching will receive a notation on their transcript recognizing their completion of the Certificate of Practice, a Letter of Completion signed by the Vice-Provost, recognition of participation during graduation, and a celebration with other awardees at the end of the academic year of completion.