# **EDUC X401: Learning, Cognition, and Instruction (3 units)**

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*UC Merced Extension Education Programs has developed a plan for preparing teachers, which is defined by our Mission and Vision statements and is aligned with the Teacher Performance Expectations (TPEs) and the California Standards for the Teaching Profession (CSTP)****,*** *developed by the California Commission on Teacher Credentialing (CTC).*

**Mission**

The UC Merced Teacher Preparation Program exists to develop culturally responsive educators who equitably facilitate cross-disciplinary, integrative learning to catalyze student potential and empowerment.

**Vision**

The UC Merced Teacher Preparation Program aspires to be a recognized model for developing culturally responsive teachers who are committed to empowering their students. The Teacher Preparation Program is aligned with the vision of the University of California, Merced—upholding 21st century priorities for interdisciplinary learning and public service. To achieve this aspiration, the Teacher Preparation Program:

1. Aims to establish culturally respectful communication regarding questions, ideas, and solutions in the context of the Teacher Preparation Program courses and clinical placements.
2. Aims to nurture collaboration between teacher candidates and students to achieve learning goals, maximizing collective talent and expertise.
3. Aims to develop skills for critical and creative problem-solving among teacher candidates and students, applicable to all content domains.

**Extension Education Programs Learning Outcomes (EPLOs)**

The UCM EXT Teacher Preparation Program mission and vision are embedded in our Extension Education Programs Learning Outcomes (EPLOs). Teacher candidates graduating from the UCM EXT Teacher Preparation Program will be able to:

**Cultural Responsivity and Values (CRV):** demonstrate awareness, sensitivity, and responsiveness to diversity in every domain of learning, understanding values as opportunity for respectful exchange, collaboration, and shared commitment to the greater good.

**Content Knowledge (CK):** master state standards in the arts, humanities, language, literature, mathematics, physical science, natural science, and applied science along with capacity to monitor and guide personal learning.

**Communication and Information Literacy (CIL):** effectively convey information, engage in respectful dialogue, and share ideas through oral and written discourse, cultivating inquiry inclusive of self, other, and community.

**Professional Development (PD):** deploy problem-solving skills capable of transforming classrooms, promoting justice, fostering collaborative leadership, and addressing community concerns with mature civic identity.

**The Teacher Preparation Program Learning Outcomes (PLOs)**

Candidates (students) who complete the Teacher Preparation Program will be able to:

1. Develop a philosophy of education which uses theory to collaboratively guide practice, attending to the cultural and socio-emotional dimensions of teaching.
2. Personalize instruction and develop co-teaching models.
3. Develop lesson plans and deliver effective cross-disciplinary content, deploy appropriate assessments, distinguish between students of differing abilities, and apply learning-enhancing technologies to promote student potential and empowerment.
4. Practice restorative justice and authentic care.
5. Nurture and educate English language learners through an inclusive and positive class environment.
6. Develop critical and creative problem-solving for student empowerment across all academic subjects and content domains.
7. Communicate effectively through oral, visual, and written means with a wide range of audiences, including colleagues, families, and the community.

Finally, the *Teacher Performance Expectations (TPEs),*developed by the California Commission on Teacher Credentialing (CTC), and aligned with the California Standards for the Teaching Profession (CSTP) define how we formatively and summatively assess candidates.

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| **TPE 1:** Engaging and Supporting All Students in Learning | **TPE 2:** Creating and Maintaining Effective Environments for Student Learning | **TPE 3:** Understanding and Organizing Subject Matter for Student Learning |
| **TPE 4:** Planning Instruction and Designing Learning Experiences for All Students | **TPE 5:** Assessing Student Learning | **TPE 6:** Developing as a Professional Educator |

1. **Course Description:** EDUC X401 considers child and adolescent learning in cognitive, developmental, linguistic, and socio-cultural relief. Readings, simulations, and activities explore the instructional utility of course content through developmental neuroscience, social neuroscience, and classic learning theories. Learning is framed as goal-oriented expertise capable of empowering diverse students and K-12 classroom communities.

1. **Course Goal and Outcomes**

1. ***Course Goal:*** The primary course goal is to provide candidates with a comprehensive understanding of child and adolescent learning, cognition, and development promoting effective instruction across content disciplines and grades, benefitting culturally, ethnically, and linguistically diverse learners.
2. ***Learning Outcomes:*** Course Student Learning Outcomes (CLOs) are linked with Teacher Performance Expectations (TPEs) outlined by the CTC and with Program Learning Outcomes (PLOs), which are informed by the Extension Education Programs Learning Outcomes (EPLOs).
3. ***Literacy Definition and Course Component:*** CLO 3

Digital literacy includes “the ability to effectively plan and monitor the efficacy of strategies used to search and manage the wealth of information available online, and the knowledge to appropriately vet and integrate those information sources. Therefore, digital literacy requires effective self-regulated learning (SRL) skills, and availing epistemic cognition (EC)” (Greene, Seung, & Copeland, 2014, p. 55).

1. ***English Language Learner (ELL), English Language Development (ELD) and/or Specifically Designed Academic Instruction for English (SDAIE) Course Component:*** CLO 2
2. ***Inclusive Instruction Course Component:*** CLO 2 and 4
3. ***Technology Course Component:*** CLO 3

The Course Learning Outcomes (CLOs) support student development of the Program Learning Outcomes (PLOs). The connections between the CLOs are made explicit through the indication of which PLOs are connected to each CLO below.

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| **CLOs & Assessments** | **Grading** |
| **CLO 1:** Candidates will critically evaluate scientific and philosophical learning principles to engage and support all students in learning (TPE 1; PLOs 1, 2, 3, 5, 6, 7).  **Assessment:** Critical Reading Blogs (CRBs); Content to Practice Presentations (CPP) | Description, Points, Weight:  see below |
| **CLO 2:** Candidates will use scientific and philosophical learning principles to create and maintain effective environments for diverse students and classrooms (TPE 2, PLOs 1, 2, 3, 4, 5, 7).  **Assessment:** Midterm Examination; Content to Practice Presentations (CPP); Educational Narrative | Description, Points, Weight:  see below |
| **CLO 3:** Candidates will apply scientific and philosophical learning principles for digital literacy instruction (TPE 3; PLOs 2, 3, 5, 6, 7).  **Assessment:** Content to Practice Presentations (CPP) | Description, Points, Weight:  see below |
| **CLO 4:** Candidates will consider whether/how scientific and philosophical learning principles intersect with personal values and biases influencing instruction (TPE 6; PLOs 1, 4, 6, 7).  **Assessment:** Critical Reading Blogs (CRBs); Content to Practice Presentations (CPP); Educational Narrative | Description, Points, Weight:  see below |

| Description of Assessments | Points | **Weight** | Due Date |
| --- | --- | --- | --- |
| **Class Participation**  Your participation grade will be based on attendance in class, preparation, and engagement with your colleagues. | 10 | 10% | Weekly |
| **Critical Reading Blogs (CRBs)**  This course includes weekly readings on learning. Critical engagement with the readings is required. The CRB assignment consists of weekly blog entries (minimum 250 words) on assigned reading. In addition, you must respond to CRB entries of at least two other students per week. Your blog should consider the following:  *What are the implications of the current reading for child and adolescent learning? Should this content inform my instructional practices? Why or why not?*  A grading rubric for this assignment will be distributed in class | 15 | 15% | Weekly |
| **Midterm Examination**  This course covers the science and philosophy of learning. These epistemologies are presented sequentially. The midterm covers scientific (development, cognition, emotion, perception, neuroscience, expertise) content on child and adolescent learning. Material from readings, videos, activities, and lecture will be included. The midterm will require students to apply scientific content to instructional practices. | 25 | 25% | Week 8 |
| **Content to Practice Presentations**  21st century education facilitates student learning for digital literacy and expertise. In groups of 2-3, select a learning theory from the Bates textbook. Consider this theory in terms of perceptual learning. Collaboratively plan and facilitate a 45-minute instructional encounter which applies your theory with an aspect of digital literacy selected by the group. All group materials (i.e., lesson plan, power point slides, activities, audio-visual content) should be collectively managed and shared with the instructor using Google Docs. CPP Google Docs lacking evidence of group interaction and full participation from each member will receive a lower grade.  A grading rubric for this assignment will be distributed in class. | 25 | 25% | Weeks  13-15 |
| **Educational Narrative**  Write a 1-2 page personal narrative documenting a childhood moment, situation, or encounter that facilitated your learning and inspired you to become an educator. Write a 4-6 page response to your own narrative. What scientific learning principles were operative in your experience? What philosophical learning principles are visible through your experience? What values and beliefs about learning were cemented through your experience? How is your approach to learning and instruction different because of the experience?  A grading rubric for this assignment will be distributed in class. | 25 | 25% | Week 14 |

1. **Format and Procedures:** This synchronous, face-to-face class meets weekly for a semester. Some course content and all assessment submissions are handled through the Canvas learning management system.

1. **Course Requirements**
   1. ***Class Attendance and Participation Policy*** 
      1. Attendance: Attendance for all class sessions is required. A candidate is responsible for the content and experiences of any missed class sessions. Missing more than one class session for any reason constitutes excessive absences, which may be handled in the following way:
         1. Absences may impact a candidate’s final grade.
         2. The candidate may be granted an incomplete (in the case of illness or death in the family) and asked to retake a portion of, or the entire course in the following term.
         3. The candidate may be asked to re-enroll or retake the course.
      2. Anticipated Absences: The candidate is responsible for clearing anticipated absences with his/her professor of the class BEFORE committing to an event which conflicts with class (e.g., Back to School Night). This assures that a candidate has either developed a plan for receiving full benefit from the course or does not commit to the conflicting event.
      3. Late Work: In general, the policy regarding late work is that if work is late due to an excused absence (an absence cleared in advance), the work may be turned in up to one week late without penalty. All other late work is docked one letter grade and must be turned in within one week of its due date. Work turned in later than one week will receive no credit.
      4. Participation**:** Candidates are expected to participate fully in each class session, as each Teacher Preparation Program course is a combination of theory and praxis to facilitate development of the California Standards for the Teaching Profession (CSTP) as outlined in the Teaching Performance Expectations (TPEs), developed by the CTC.
      5. Tardiness: A candidate who is late to class is considered absent for that portion of the class. Habitual tardiness will accumulate to equal an absence of one or more class sessions (refer to section on Attendance above).
   2. ***Technology Policy***

Candidates are preparing to become professional educators. Candidates are expected to conduct themselves as professionals, fully engaging classroom learning as a matter of courtesy extended to colleagues. Smart phone and laptop technologies are for learning purposes only. These cannot be used during class for personal texting, email, or social media. Violators will receive a “F” grade for class participation.

* 1. ***Time Expenditure***

EDUC X401 is 3-unit course requiring a total of 135 hours (including class time) over the semester. The following is an estimated breakdown of time candidates can expect to spend in completing this course:

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| Class Sessions | 45 hours |
| Weekly Reading | 45 hours |
| CRBs | 10 hours |
| Midterm Prep | 5 hours |
| CPP | 15 hours |
| Educational Narrative | 15 hours |
| **Total** | **135 hours** |

1. **Grading Procedures:** All UC Merced Extension Teacher Preparation Program courses are graded. The course grade will be calculated as follows:

|  |  |
| --- | --- |
|  | % |
| Participation | 10 |
| CRBs | 15 |
| Midterm | 25 |
| CPP | 25 |
| Educational Narrative | 25 |
| **Total** | **100%** |

Candidates must achieve a B course grade for credit in the UC Merced Extension Teacher Preparation Program. A course grade lower than B is not acceptable for credit in the Teacher Preparation Program. Letter grades will be assigned as follows:

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| --- | --- | --- | --- |
| **Letter Grade** | **Percentage** | **Grade Point Equivalent** | **Graduate Level Grades** |
| A | 93-100% | 4.0 | Excellent |
| A- | 90-92% | 3.7 | Outstanding |
| B+ | 87-89% | 3.3 | Above Average |
| B | 83-86% | 3.0 | Average |
| B- | 80-82% | 2.7 | Satisfactory |
| C+ | 77-79% | 2.3 | Marginal, but not acceptable for credit in the Teacher Preparation Program |
| C | 73-76% | 2.0 |
| C- | 70-72% | 1.7 |
| D | 60-69% |  | Not acceptable |
| F | 0-59% |  | Not acceptable |

1. **Academic Integrity:** Each candidate in this course is expected to abide by the University of California, Merced Academic Honesty Policy. Any work submitted by a candidate in this course for academic credit will be the candidate's own work. Candidates are encouraged to study together and to discuss information and concepts covered in the course with other students. Candidates can give "consulting" help to or receive "consulting" help from each other. However, this cooperation should never involve one student taking credit for work done by someone else. Violation of UC Merced Academic Honesty Policy will result in an automatic “F” for the assignment. At instructor discretion, the policy may be extended to include failure of the course and/or University disciplinary action.
2. **Accommodations for Students with Disabilities:** The University of California, Merced is committed to ensuring equal academic opportunities and inclusion for candidates with disabilities based on the principles of independent living, accessible universal design and diversity. The instructor is available to discuss appropriate academic accommodations that may be required for a candidate with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester (or equivalent), except for unusual circumstances. Candidates are encouraged to register with the Disability Services Center to verify their eligibility for appropriate accommodations.
3. **Tentative Weekly Schedule**

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| **TENTATIVE SCHEDULE**  **(subject to change)** | | | |
| **Week** | **Topic** | **Before Class** | **Due** |
| 1 | *Why this class? Welcome, introductions, and overview.*  Topic: Learning as goal-oriented expertise.  Topic: Learning in child & adolescent development.  Topic: Piaget and Vygotsky | Canvas Week 1 |  |
| 2 | *Children are growing, teachers must adapt.*  Topic: Reciprocity and motivation to learn.  Topic: Developmental systems.  Topic: Infancy. | Canvas Week 2  Balswick et al., chapters 4-6 | CRB 1 |
| 3 | *Would someone please tell me why kids do that?*  Topic: Childhood.  Topic: Adolescence.  Topic: All teachers are developmentalists. | Canvas Week 3  Balswick et al., chapters 7-8 | CRB 2 |
| 4 | *Cogitate on this: Perceptual learning is good science.*  Topic: Unpacking perceptual learning and expertise.  Topic: The meaning of infant pacifiers: Symbolic representation and learning.  Topic. Why amodal perception matters. | Canvas Week 4  Kellman & Massey, 118-139 | CRB 3 |
| 5 | *Perceptual learning and teaching.*  Topic: PL and math learning.  Topic: Perceptual learning modules (PLMs).  Topic: PL and instruction. | Canvas Week 5  Kellman & Massey, 140-159 | CRB 4 |
| 6 | *Values, beliefs, and reciprocity—expectancy value.*  Topic: Motivated to learn, self-conscious emotions.  Topic: Motivated to learn, expectancy value.  Topic: Motivated to learn, STAMINA. | Canvas Week 6  Wigfield & Eccles | CRB 5 |
| 7 | *The Bellman equation made me do it.*  Topic: Behaviorism.  Topic: Cognitivism.  Topic: Humanism. | Canvas Week 7  Bates, sections 1.1-1.4 | CRB 6 |
| 8 | Midterm Exam  *Following the midterm, we transition from science of learning to philosophy of learning.*  Topic: Good science comes from the lab, good philosophy comes from the classroom.  Topic: Science meets Socrates: Equitable critique.  Topic: Educational philosophies. | Midterm Prep  Canvas Week 8 | Midterm Exam |
| 9 | *Modeling reciprocity, collaboration.*  Topic: CPP overview, digital literacy medium, group selection.  Topic: Learning as respect, welcome, inclusion.  Topic: Teaching for pattern recognition. | Canvas Week 9  Bates, 2,1; 2.4-2.6 | CRB 7 |
| 10 | *Learning requires instructional planning.*  Topic: Pattern recognition in curriculum.  Topic: Pattern recognition in lesson design.  Topic: Goals, language, and narrative. | Canvas Week 10  Bates, 3.1-3.2 | CRB 8 |
| 11 | *Learning requires assessment.*  Topic: Formative assessment for learning.  Topic: Summative assessment for learning. | Canvas Week 11  Bates, 3.3-3.5 | CRB 9 |
| 12 | Instructional simulation lab.  *What aspect of learning is proving most difficult to translate into instruction?*  Create a K-8 instructional session (content of your choosing) which incorporates the same perceptual learning and philosophical approach identified by your group for the CPP next week. | Canvas Week 12 |  |
| 13 | Content to Practice Presentations | CPP Prep | CPP |
| 14 | Content to Practice Presentations | CPP Prep | CPP  **Educational Narrative Due** |
| 15 | Content to Practice Presentations | CPP Prep | CPP |

**Required Texts**

Balswick, J., King, P., & Reimer, K. (2016). *The reciprocating self* (2nd edition). Downer’s Grove, IL: InterVarsity.

***Nota bene*.** For the sake of your finances, the instructor will provide selected readings for this textbook. You are not required to purchase for the course.

Bates, B. (2016). *Learning theories simplified: How to apply them to teaching*. London: Sage.

**Required Articles**

[Kellman, P., & Massey, C. (2013). Perceptual learning, cognition, and expertise. *The Psychology of Learning and Motivation,* First Edition, 117-165.](http://cognitrn.psych.indiana.edu/rgoldsto/courses/cogscilearning/kellmanmassey.pdf)

[Wigfield, A., & Eccles, J. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology 25*, 68-81.](https://s3.amazonaws.com/academia.edu.documents/46409151/Expectancy-Value_Theory_of_Achievement_Motivation.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1510776569&Signature=o3fKAAoLR3rqU%2FcvYB6lfOjdpXY%3D&response-content-disposition=inline%3B%20filename%3DExpectancy_Value_Theory_of_Achievement_M.pdf)