



# Journey Map: Novice STEM Professor

## Timeline: one semester

Phase	Preparation			Teaching		Assessment	Evaluation
Touchpoint	Aware	Research	Plan	Before Midterm	After Midterm	Learning Objectives	Teaching Reflection
Ideal Experience	Consider role of communication skills  Review co-workers' examples	1. The standards of communication skills; teaching in STEM domains 2. How to integrate communication skills teaching into	With regard communication skills teaching: 1. Set learning objectives; 2. Design assessment tasks; 3. Design instructions	1. Implement the teaching plan; 2. Observation and data- collection	1. Modify the teaching plan based on the first half of the semester's feedback; 2. Observation and data- collection 2. Constantly pay attention to communication skills teaching	Assess communication skills	1. Self-evaluate the alignment of learning objectives, assessments and instructions; 2. Summarize lesson learned; 3. Form suggestions to the
Activities in reality	Underevaluate the role of communication skills in students' learning and future work	1. Very few of STEM professors do research about communication skills teaching; 2. Many of them only focus on the domain-specific	Some professors integrate communication skills into domain teaching but don't perceive it as one of the key learning	Around half of professors constantly minor their teaching plan implementation and collect feedbacks from students	Around half of professors modify their teaching plan based on their observations and feedbacks	Many of the professors don't specifically assess students' communication skills. The grading rubrics doesn't value communication skills	Very few professors reflect on communication skills teaching at the end of the semester
Opportunities	The department should integrate communication skill teaching into professors' teaching evaluation system to	 	Peer-review of the teaching plans and syllabi so that professors can work together to improve their communication skills	1. Professors should work as role models as good communication and leadership; 2. Professors should intentionally practice their own communication skills both in class-setting teaching and out-side-of-the class interaction with students; 3. Professors should refer students		1. The STEM department should require professors add communication skills to grading rubrics; 2. The STEM department should require all the students need to have portfolio; 3. CMU and the STEM departments should organize portfolio work-	1. GCC and Eberly Center should conduct the surveys to professors to guide them to reflect on their communication skills teaching; 2. Each STEM department should require professors at least attend one time of the communication skills teaching training/workshop for each year.