

**CALIFORNIA UNIVERSITY
OF PENNSYLVANIA**

Program: Master of Arts Teaching: Secondary Education Earth & Space Science

Start: Fall (August) Start

Total Credits: 45 Graduate Credits for Master's degree

	Credits
MAT 181 College Algebra (or higher)	3
Required Content Courses: A grade of C or better is required for certification	
CHE 101 General Chemistry I	4
PHY 121 General Physics	4
PHS 145 Astronomy	3
EAS 150 Introduction to Geology	4
EAS 163 Introduction to Oceanography	3
EAS 200 Historical Geology	3
EAS 230 Earth Resources or 39X	3
EAS 240 Introduction to Meteorology	4
EAS 242 Climatology	3
EAS 303 Hydrology	3
EAS 343 Geomorphography	3
Science elective (EAS, CHE, BIO, PHS, PHY)	3
Cal U Required Courses	
Fall	
MSE 641 Orientation to 7-12 Ed.	3
MSE 642 Standards-Based Instruction in 7-12 Ed	3
ESP 610 Sp. Ed. Foundations & Collaboration	3
	9
Spring	
MSE 643 Content Area Literacy in 7-12 Ed.	3
MSE 644 Instructional Strategies in 7-12 Ed.	3
ESP 701 Introduction to Behavior Analysis	3
	9
Summer	
MSE 653 Methods of Science Teaching K-12*	3
MSE 646 Assessments and Interventions*	3
MSE 645 Technology Integration in 7-12 Ed.*	3
	9
* 2-day on-campus July residency will be integrated into the summer MSE courses	
Fall	
MSE 647 Classroom Management in 7-12 Ed.	3
ESP 613 Evidence-Based Practices for Sec Inclusion	3
EDU 650 Supporting the English Language Learner	3
	9
Spring (Must earn a Recommendation for Student Teaching)	
MSE 661 Student Teaching & School Law	9
	9
Total Graduate Credits	45