STEAM Education

Specialization within Masters of Arts in Education program

CONTACT

For more information on the Science, Technology, Engineering, Arts, and Mathematics (STEAM) Education cognate, please contact Dr. Rosie Young, Chair of the Masters of Arts in Education (MAED) and Rank 1 programs at ryoung@bellarmine.edu or Dr. Jessica Ivy, STEAM Educator, at jivy@bellarmine.edu. Information about the program can be found at our website: https://www.bellarmine.edu/education/graduate/master-of-arts-in-education-online/

STEAM EDUCATION

The Master of Arts in Education STEAM Education cognate program is designed to develop teacher leaders who will reflect continuously upon: STEAM leadership skills; STEAM coaching and mentoring; analysis of assessment and data to impact STEAM instruction; strategies for closing the achievement gap through STEAM best practices; the need to address equity and diversity in schools through STEAM; and collaborative efforts to include colleagues, parents, and the community in comprehensive efforts through STEAM.

PROGRAM OVERVIEW

This fully online program is at the Master's Level as well as the Rank 1. Rank 1 in Kentucky is achieved when a teacher has taken 60 hours above the bachelor's program. Candidates complete a set of core requirements common to teacher leader programs (15 hours), the STEAM strand courses (12 hours), and a capstone experience (3 hours). Candidates work collaboratively with a faculty advisor, course instructors, and a building administrator or designated professional educator to implement required assignments, school-based action research, field activities, anchor assessments, and professional development in a cohort-based professional learning community. Acceptance into this program requires the candidate to hold a valid classroom teaching certificate and current employment in a classroom setting or have access to a school setting.

COSTS, TIMELINE, & DELIVERY

The Masters of Arts in Education program is a cohort system with each cohort starting in the summer and completing the program the following summer. This program is entirely online and costs for the 2019-2020 year are highly competitive at only $410 per credit hour. Each cohort begins in the summer taking three classes, two in the fall, two in the spring, and completing with three in the following summer.

STEAM EDUCATION COURSEWORK

EDUG 681 STEAM Instructional Design and Tools

Course Description: This course is designed to teach effective uses of educational tools technologies towards engagement in modeling through inquiry in STEAM Education. Students learn the key components of facilitating inquiry through their own building of accurate conceptual models of explanations of key STEAM theories and underlying concepts. Utilizing technologies implemented in authentic STEAM practice, students learn how to design instruction to allow students to make controlled observations, analyze data, recognize patterns, propose and revise their models of explanation, and communicate their models to their peers. Application of these skills is utilized through STEAM instructional design process.

EDUG 682 Transdisciplinary Teaching through STEAM

Course Description: This course engages educational professionals in the exploration and application of transdisciplinary teaching through a STEAM lens. Through scholarly readings, exemplars from field, and task exploration, candidates distinguish between multidisciplinary, interdisciplinary and transdisciplinary teaching.

EDUG 683 Assessment in STEAM

Course Description: This course prepares teacher leaders to assess students' work produced in transdisciplinary STEAM classes. Students create, evaluate, and implement a variety of equitable and culturally inclusive formative and summative assessments to inform and guide instruction and improve learner outcomes in transdisciplinary curricula.

EDUG 684 Professional Leadership in STEAM
Course Description: This course prepares students to be STEAM teacher leaders. Students continue to develop and apply the skills acquired in previous course work to evaluate and design STEAM programs and to create and support a collaborative, inclusive STEAM culture within their schools. Students engage in systematic inquiry of research on andragogy and STEAM education to inform the development and implementation, in collaboration with colleagues, school stakeholders, and the community, of inclusive professional learning. Students also develop the knowledge and skills necessary to be effective STEAM leaders in their schools, districts, state, and professional organizations.