

Academic Freedom & Standards

Missouri S&T Undergraduate Experiential Learning Standard & Operating Procedure

Standard

All undergraduate students graduating from Missouri S&T are required to have an experiential learning activity as part of their degree requirement. There is a long tradition of experiential learning. One of the early proponents was John Dewey, the Progressive era education reformer. Dewey argued that educators should move from teaching abstractions to instruction based upon problem solving and learning by doing. In other words, educators should encourage students to apply what they are learning. As he wrote in 1938, “There is an intimate and necessary relation between the process of actual experience and education.”

Key Elements of Experiential Learning

- Student centered rather than teacher centered
- Active learning rather than passive learning
- Application of learned principles to form realistic solutions to problems, issues and challenges
- Reflection upon the learning experience.

General Definition

Experiential learning at Missouri S&T refers to learning stimulated by a variety of structured activities that differ significantly from the traditional lecture format. Experiential learning activities are designed to require students to go beyond mastering basic skills and knowledge in the application of that material to problem solving challenges. These activities involve collaboration and reflective learning and allow students to learn in environments that align with their aptitudes.

Implementation Guidelines for Missouri S&T

To qualify:

1. The activity must be University sponsored or affiliated and the student must receive written approval of the activity from a faculty member or academic advisor in the student’s degree program. Approval of the initial activity does not automatically imply

approval of the overall experience. Degree programs may develop lists of pre-approved activities that will count as significant experiential learning activities if completed.

2. The faculty member or academic advisor will ensure that the activity is of significant duration, intensity and rigor to demonstrate successful application of learned principles appropriate to the expectations of the degree program faculty (it may be that more than one activity could be combined to create a suite of experiential learning activities for a single student that may be approved in satisfaction of this requirement).
3. The focus must be on “learning by doing” in a creative and innovative activity that generally falls outside the realm of the traditional lecture classroom experience and contributes significantly to professional and personal development.
4. Finally, a significant experiential learning activity will include a written summary reflection piece that will document the experience from the student’s perspective; this written reflection piece should be of a quality suitable for inclusion as an attachment to a co-curricular transcript or in an e-portfolio that might be submitted by the student to potential employers or to graduate school admissions committees.

Examples of activities that might qualify:

- Undergraduate research (OURE projects, NSF Research Experience for Undergraduates, Honors Academy senior research project, etc.)
- Co-Op, summer internship, and externships in industry or at a research center
- Significant participation on a student design team
- Study abroad
- S&T sponsored service learning (e.g., EWB, Bio Sci and Psychology capstone service learning or internship projects, Miner Challenge)
- Significant involvement in national/international competitions such as Chem-E Car, IEEE Robotics, etc.
- Field camp/ field trip experiences of significant duration and intensity
- Practicum or formalized student teaching
- Mentor/coach/tutor over a sustained period in an S&T sponsored mentoring program (Student Success Coaches, Peer Learning Assistant, On-Track Mentor, Opening Week Mentor - which continues through the academic year with programming such as ReConnect1 and 2)
- Paraprofessional, mentoring, peer teaching positions (Resident Assistants, Programming Resident Assistants, Chancellors Leadership Academy Advisors, Peer Involvement Advisors, Miner Mentors, Joe’s P.E.E.R.S., Health Related Careers Mentoring Program, Admissions Ambassadors, PRO Leaders)
- Leadership positions within student governing boards (Student Council, Student Union Board, Inter-fraternity Council, PanHellenic Council, Greek Chapter Executive board, Residence Hall

Association, National Residence Hall Honorary, Residence Hall Executive Board, Cultural Activities Planning Committees, Student Judicial Boards, Student Athlete Advisory Committee)

- Year-long leadership involvement experiences (Global Leaders Institute, Chancellor's Leadership Academy, Student Leadership Conference Chair, Intercollegiate Athletics Team)
- Leadership workshops and retreats (NRHA Leadership Trip, Greek Chapter retreats, Backpack to Briefcase, Student Leadership Conference, Sue Shear Leadership Academy)
- Activities provided in campus residences that are judged as an effective conduit for Missouri S&T to connect students' in-class experiences to their life within the campus community. A variety of activities are provided to support academic success and enhance professionalism, time management, leadership, project management, and interpersonal, and communication skills.

This list is not meant to be all-inclusive or restrictive. The faculty in each degree program must come to consensus on activities they will accept within the structure and expectations of their degree programs; however, activities must embody the spirit and intent of the Missouri S&T definition and implementation guidelines delineated above.

Operating Procedure

Per CRR 300.030.4.1.3, each department is delegated jurisdiction over the curricula of the department. Accordingly, each department shall have authority over what activities it will accept to meet the campus-wide experiential learning requirement for all undergraduate students. When an undergraduate student has satisfied the departmental requirement for experiential learning for a specific degree program, the department will notify the Office of Undergraduate Studies who will keep the records and also notify the Registrar's Office which shall update the student's Degree Audit for that particular degree program, marking a completion check box similar to senior assessment. Note that it is up to departments to decide for a particular degree program whether to accept another degree program's experiential learning requirement, so students taking multiple majors or transferring from one degree program to another may need to satisfy multiple, possibly non-overlapping, experiential learning requirements.

Undergraduate Catalog Entry

All students at Missouri S&T are required to participate in appropriate experiential learning activities. Experiential learning refers to learning stimulated by a variety of structured activities that differ significantly from the traditional lecture format. Experiential learning activities are designed to require students to go beyond mastering basic skills and knowledge in the application of that material to problem solving challenges. These activities involve collaboration and reflective learning and allow students to learn in environments that align with their aptitudes.