

RAIL SAFETY

States balk at keeping oil train
info from public | PAGE A7



Police reports,
obituary
PAGE A7

MSU engineering faculty published in top journal

By Chronicle Staff

Two Montana State University electrical engineering professors have researched new teaching methods for engineering and published their findings in the May issue of a premier engineering education journal.

Brock LaMeris and Jim Becker, professors in MSU's electrical and computer engineering department, were published in the international engineering magazine IEEE Transactions on Education.

"There are only six articles featured in the journal and to have two of them from Montana State University is quite impressive," said Robert Maher, electrical engineering professor and department head.

Becker's article compares students learning in an electrical circuits course using conventional lectures and lab work, versus a new approach using hands-on experimentation and problem-based group work to solve circuits.

"The idea is to have the students ... work together to figure out the principles and procedures instead of being told the facts and answers," Becker said. Students were more engaged, got a deeper level of learning and developed interpersonal communication skills. "Building communities," he said, "increases the likelihood of student success."

Becker and LaMeris have both assumed active roles in developing new teaching methods for engineering students and have received recognition and numerous grants from IEEE, NASA and the National Science Foundation.

LaMeris' paper compared how well students learned about digital circuits using an online delivery as opposed to face-to-face lectures. LaMeris also created technology so that the students could take the entire engineering course online.

LaMeris said online courses can offer three benefits: access to courses for students transferring into MSU, scheduling flexibility for current students and more options for non-traditional students who could take an online course in the evenings.

"Online education really depends on the content and type of class," LaMeris said. "The results were positive for the digital circuits curriculum, but online delivery might not be as effective for other types of courses."