

**Nomination materials for the Chancellor’s Award for Excellence to a Non-Tenure Track  
Faculty Member**

**Nominee:**

Michael Fix  
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**Nominated by:**

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**Included documents:**

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	David Parris	
	Rudolph Brockfield	
	Eva Dunn	
	George Scott Tapp	
	Donna Lamanna	

To whom it May Concern,

I am writing to strongly recommend Michael Fix for the Chancellor's Award for Excellence to a Non-Tenure Track Faculty Member. Mike has been teaching Geology courses at UMSL since 1976, first as a lecturer and then as an Assistant Teaching Professor in the Department of Physics & Astronomy. In that time, he has received excellent teaching evaluations and is well respected and admired by his students. His geology courses attract a large number of students.

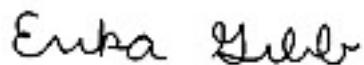
Mike devotes an unusual amount of time to his teaching. He generally teaches 3 sections of geology each semester. In addition to this, he also teaches 4-5 lab sections each semester. He is in the unusual position of teaching a science course for which there is no major or minor program. Hence, there are no graduate students available as teaching assistants. He has talented undergraduates who took his course assist him, but he is present and teaching each section and each lab. This means he often spends 21-24 hours in the classroom each week. Students often comment that he is also available outside class for help. His devotion to helping students succeed in his courses is one of his many strengths.

Mike utilizes modern teaching tools in his courses. As geology is a visually intensive field, he uses PowerPoint lectures with images to illustrate key concepts. When published images are unsatisfactory, he uses graphics software to improve upon or design graphics that better illustrate the geology concept he is teaching. Mike also brings in examples of rocks and minerals so that students can use their other senses to learn about geology. For example, he has samples of the rock layers around the St. Louis area (and amusing stories about how and where he collected them) and uses them in conjunction with geological maps so that students can both see and feel the geology of this region.

In addition to his teaching, Mike is involved with the excavation of the Chronister Dinosaur site in southeastern Missouri. He devotes 10 hours each month as a science consultant and volunteer worker at the Bollinger County Museum of Natural History where he works painstakingly to free dinosaur fossil bones from the surrounding rock and discusses paleontology and geology with the public. He gives public talks relating to geology and paleontology at nature centers and science museums, including the St. Louis Science Center.

In conclusion, Michael Fix has been a strong asset to the department of Physics and Astronomy, both for his teaching and his public outreach. His devotion to imparting scientific knowledge to non-science majors in a way that leaves a positive impression of science is very important. Mike is very deserving of recognition for his 34 years of outstanding teaching and service at UM-St. Louis.

Sincerely,

A handwritten signature in dark ink, appearing to read "Erika Gibb". The script is cursive and fluid, with the first name "Erika" and last name "Gibb" clearly distinguishable.

Dr. Erika Gibb

### PRODUCTION OF LEARNING SUPPORT MATERIALS

I have created numerous class handouts for lectures including study guides, illustrations, and charts. I also create overhead transparencies with all key terms and definitions that I use in conjunction with my own PowerPoint presentations of photos, charts, and illustrations. This enables students to have very complete and accurate notes.

I have made models for use in classroom demonstrations.

I co-produced a video documentary "St. Francois Mountains: Gem of the Ozarks" which I show in my classes.

In lab, I have created explanatory class handouts for each lab exercise, as well as worksheets, sample lab exams, actual lab exams, and study sets of minerals or rocks that students can check out at the Thomas Jefferson Library for study purposes.

### PUBLIC SERVICE

Over the years I have given many public talks to clubs, and schools, and other institutions on a range of geological and paleontological topics including: a talk on the New Madrid earthquakes, for the Missouri Historical Society, a talk on the coevolution of mammals and grasses for the Eastern Missouri Society for Paleontology, and a yearly talk on dinosaurs for the second grade class at Holy Trinity School in St. Ann, and most recently a talk on the earthquake in Haiti at Dewey Elementary in Richmond Heights.

I have done extensive volunteer work on behalf of the Bollinger County Museum of Natural History in Marble Hill. I have written text for some of the museum displays, and helped in the construction of some of them. I have prepared and catalogued fossils for the museum collection. I have written articles for the museum web site. I gave a talk on the Missouri dinosaur site, gratis, as part of a museum fundraiser.

I also did volunteer work helping to renovate the space that became the City Museum.

I have on several occasions worked as a judge for local science fairs, including the Greater St. Louis Post Dispatch Science Fair.

I wrote, illustrated, and narrated a video documentary completed in Fall 1996, titled "St. Francois Mountains: Gem of the Ozarks," which was aired in the St. Louis area on the Higher Education Channel in January 1997, and on local access cable on TCI and American Cablevision.

In 1997-98, I was a participant in the "Measure of St. Louis Project," conducted by "Sustainable St. Louis," under the direction of Dan Lehouckey. The purpose of this project was to evaluate the quality of life and environmental sustainability within the greater St. Louis area, and to establish a set of goals and suggestions to help policy makers achieve them.

### **III. Nominee's statement of teaching philosophy**

#### **Teaching Philosophy and Goals**

To me the most important thing to impart to my students is not necessarily some body of specific facts, most of which will be forgotten in the passage of time, but rather I hope to expand their appreciation for what a beautiful, complex, fascinating and potentially dangerous place the Earth is. From the feedback that I have gotten from the many former students that I have encountered over the years, it appears that I have succeeded at least with some of them. Many have related how they had a much better understanding and/or appreciation for geology when they have encountered it in the media, or in the natural world.

To facilitate this transfer of knowledge and interest, I have kept certain principles in mind and tried to hone skills that would help me to implement them.

I believe that information should be presented in an organized fashion so that ideas clearly and logically flow from one to another. To that end, my lectures have always been constructed according to outline form. I admit that part of this is simply because I have a need to organize information in order to present it, but I have been told by many students that it has been very helpful to them to have such complex information presented in an organized fashion.

Another principle that I adhere to is the old saying "one picture is worth a thousand words." I incorporate a great many photos, illustrations, animations and sometimes, video clips and classroom demonstrations into my presentations to provide visual reinforcement.

Because the vast majority of my students are nonscience majors, I make sure that I define all scientific terms and explain concepts in the simplest possible terms. I assume that they know nothing about the subject of geology or science in general. In my experience this has been proven to be true for many if not most of my students. I tend to get the students who are too

intimidated by science to take chemistry or physics. I have had to tailor my methods to reach such students.

One of the skills that I have developed is the ability to formulate analogies involving familiar everyday things and situations. These serve as a mental framework that the student can use to construct the scientific concept that I'm trying to impart to them.

I also try to infuse my lectures with humor. This is just an aspect of my general personality. I warn my students from the beginning that they should expect bad jokes and puns. Even my analogies are sometimes silly. I find that this keeps the class more relaxed and helps to make it less dry and boring. I even put joke answers on many of my exam questions. I see no reason why learning can't also be fun.

Another aspect of my teaching philosophy is that I believe that in addition to imparting a certain body of facts, we as teachers should also be encouraging thinking skills. When I write an exam, I don't just test for rote learning. I always have a certain number of questions that require students to understand and relate concepts and information. This can make my exams difficult for students accustomed to multiple choice exams based solely on rote memorization. I want my students to understand things, not just memorize them.

I work hard to provide my students with supplemental materials that will help them to gain the knowledge and skills needed to succeed in my classes and labs. For example, I put up on Mygateway partial text versions of the text from my Powerpoint presentations, I provide study guides to help them prepare for exams and I conduct review sessions in which I answer questions. Also, I choose a text that is easy to read, lavishly illustrated, and adequately reinforces what I cover in class. In class I often demonstrate parts of the CD that comes with the geology 1001 class so that they can see how it reinforces the class material.

In lab, I provide very clear and explicit lab lectures and handouts so that students have the information that they will need to do the lab. I don't subscribe to the philosophy, once expressed to me by a fellow teacher, that it is better to let the students struggle to figure out how to do something in lab because they need to learn to think for themselves. I feel that students need know what they are supposed to be doing and how they are supposed to do it. In the absence of clear directions and goals, they simply get frustrated and don't learn anything except to hate science. They have enough trouble even with clear explanation and goals.

Another part of my philosophy is that as a teacher I have a responsibility to be available to help students that are having problems. I always stress that students that have not done well on an exam should come in for a consultation as soon as possible. I tell them not to wait until they have failed two exams before they get concerned.

If a student misses a lecture, I always provide a full text printout so that they can copy the missing bits onto their printout of the partial text version.

If a student misses a lab, I will give them the lab lecture and materials that they need to get caught up. This is not always easy, it often entails giving two lab lectures back to back – the one for that week's lab, and for the folks that missed the previous lab that lecture as well. I feel that if a student wants to make up the work that they have missed, that I should do what I can within reason to get them caught up.

In spite of over 30 years of teaching, I feel that I still have a long way to go in achieving my goals of educating and enlightening people about the Earth. I hope to spend more time in the coming years learning new methods of teaching so that my students will learn even better, as well as furthering my own knowledge of my field so that I can be a better-informed teacher.

#### **IV. Supporting material for the nomination of Michael Fix for the Chancellor's Award for Excellence to a Non-Tenure Track Faculty Member**

In this letter, I discuss evidence of Michael Fix's excellent record of teaching and service. I attend and evaluate at least one of his lectures in geology each semester. Since geology is a very visual science and detailed color images are essential for illustrating geological concepts, Michael lectures using PowerPoint notes. An incomplete set of notes is available to the students on Mygateway. Students complete their notes during lecture. While in the classroom, I noted that most students had the lecture notes with them and were filling them out either by hand or electronically with a laptop.

I found through repeated observations that students were consistently engaged in the lecture in all sections of geology and asking questions. Michael often uses humor during his lectures. One such example was the use of a slinky to demonstrate the difference between P (pressure) and S (shear) waves to the sound of "Whip It" by Devo in General Geology (1001). This demonstration brought on student laughter and applause. He then proceeded to tie earthquake science into the recent quakes in Chile and Haiti, discussing the types of waves and the damage they produce to human structures. This is a creative way to keep students interested and to tie geology to things with which they are familiar. In addition, this was invaluable information for those who had friends or family in the affected areas and were trying to make sense of the devastation. One such student kindly provided a letter for this nomination that specifically mentions this (Sequita Bean).

In Historical Geology, Michael also incorporates humor. In the lecture I attended during the Spring 2010 semester, he was discussing the Cambrian Explosion and the Rise of Vertebrates. In class he used a variety of images, models, and physical examples of fossils, including some found in the St. Louis area. For example, there is a rock bed off I-70 that contains many fossilized shark teeth. He also tied the information to the local geology by telling students where they could commonly find particular fossils or rock types in the St. Louis area. I found his lecture to be clear, concise, and absolutely fascinating.

Michael Fix has been actively upgrading his labs and developing new course material. He has developed several visuals using graphics software to illustrate concepts for students. This development is ongoing as he consistently strives to improve how information is displayed to students. His devotion to students and willingness to be available for help are much appreciated and this is reflected in his course evaluations.

The Department of Physics and Astronomy requires student evaluations for each course. Courses are rated on a 5 point scale with 5 being the highest score. The geology courses consistently rate above department average. For example, in 2009 the department average was 4.16. Michael Fix's courses received overall ratings ranging from 4.55 to 4.82 with median values of 5. The student comments on evaluation forms reflect the high scores. Below is a selection of student comments from Michael Fix's Teaching Evaluations from 2009 that illustrate his popularity and very positive impact on science teaching at UMSL:

“I was pleasantly surprised by how much I learned in this class and how much I enjoyed the material.”

“Mr. Fix is hilarious. I’d really like to take more classes offered by him even though they aren’t my major.”

“Great teacher, I would like him to be the teacher in all of my classes.”

“This is the best class I have taken at UMSL. Mr. Fix is a great teacher. I will take any class that he teaches.”

“Mike Fix was an awesome teacher. I learned more from this class than any other.”

“Professor Fix is extremely knowledgeable in this field. He really makes this course interesting.”

“Professor Fix is one of the fairest and finest professors at UMSL.”

“Mr. Fix is a great teacher. He makes you laugh and he makes you learn. His teaching style is very creative and innovative.”

“Fun class, made fun by Mr. Fix. Also, he used a lot of easy to understand, local examples.”

“His passion for this subject is obvious and contagious.”

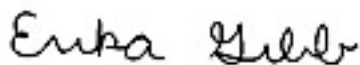
“I really enjoyed this class. The teacher is a wonderful A+++.”

“Great teacher. He’s hilarious and makes class enjoyable.”

In addition to this, Michael Fix is deeply involved in the Chronister Dinosaur site. He includes his recent work in the classroom and devotes many volunteer hours each week to cleaning bones and interacting with the public. The letters provided by Eva Dunn and David Parris, colleagues in the ongoing dinosaur research, illustrate how important Michael’s contributions have been.

In conclusion, Michael Fix has a demonstrated record of excellence in teaching and public service that has greatly contributed to a positive outlook by students and the public to science. His humor and passion for teaching are noted by many students and make him stand out as one of UMSL’s excellent teaching faculty. I highly recommend that he be recognized for his 34 years of teaching excellence at UMSL.

Sincerely,

A handwritten signature in cursive script, appearing to read "Erika Gibb".

Erika Gibb