



# The EMC Advisor

Volume 3, Issue 1



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## Program's Advisory Board

The Program is looking for individuals in EMS who are interested in serving upon our Advisory Board. This Board provides advice and assistance on matters of direction and development.

## News

### **First Graduates B. S. Degree in EMC:**

<http://www.emc.uky.edu/emcbrouchure/BStracks.htm>

EKU's EMC Program has graduated its first two people to earn a Bachelor of Science Degree in Emergency Medical Care. Brandon Hancock and Tom Kirby graduated in May of 2001. Brandon is currently working on his Master's degree in Loss Prevention and Safety and is working as a Graduate Assistant with our program. This semester, Brandon is assisting with two sections of our EMC 102 (First Responder) course. He also recently completed a CPR instructor's course and will be helping out with those classes as well. Tom reports that he has been accepted into the Physician's Assistant program at the University of Kentucky and will begin classes next semester.

As a reminder, our Bachelor's degree has two tracks of study. These are the "Clinical Track" and "Science Track". The Clinical Track focuses on practical EMS and Fire related issues. This track is intended for the practitioner who wants to function in a typical EMS and or Fire/EMS setting. The Science Track focuses on mastering the core Paramedic curriculum and additional science courses. This track is intended for the practitioner who wants to apply to medically related graduate programs like medical school or physician's assistant school.

Our Associate's degree is still in place in its two forms. One is a traditional route of on-campus course work for two and one half years. The other route is our "degree completion". The degree completion route is for persons who are already certified as a Paramedic and are seeking a degree. Either route that is chosen to obtain an Associate's degree can fit into the curriculum for obtaining a Bachelor's degree.

Detailed information about all of the degrees are available through the Program is available on our web site.

## Accreditation:

***Our program continues to be the ONLY accredited Paramedic program in Kentucky. Accreditation means that our program has undergone rigorous review by an outside independent team. The team evaluates our faculty, classrooms, equipment, tests and much more. We are proud of the hard work that has gone on in the past to gain and maintain accreditation and we intend to continue that dedication to excellence.***

## NREMT-P Results

The results of the 2001 NREMT-P examinations are in. From the graduating class of August 2001, we now have a 100% pass rate of the students who have taken the exam. Congratulations to each student. Your hard work and determination have indeed paid off. We wish you much success!

## Recent Publications / Presentations:

The program is proud to announce the recent successes of our faculty members in various academic pursuits. This list highlights the desire by the faculty to contribute to the scholarship of EMS. *(These works are listed on page 2.)*

## KBEMS

Faculty members for the program are active at various levels of the Kentucky Board of EMS. There is a list of faculty members and their involvement with the Board on page 4.

## Lecture Notes: defibrillation

A new feature of this publication will be timely articles on various topics. This edition's offering was written by Professor Mike Blakeney *(This article is on page 2.)*

## Recent Publications / Presentations:

The program is proud to announce the recent successes of our faculty members in various academic pursuits. This list highlights faculty contributions to the scholarship in EMS:

### Nancye Davis

Geriatrics Model Curriculum. Adopted by the National Association of EMS Educators (2001)

### Sandy Hunter

PowerPoint® for beginning and advanced users. September 16, 2001. National Association of EMS Educators. Pittsburgh, PA.

Diversity university: The future of successful Paramedicine is in our diversity. September 13, 2001. National Association of EMS Educators. Pittsburgh, PA.

Warp speed: EMS education at the speed of light. March 4, 2001. South Carolina EMS Symposium. Myrtle Beach, SC.

### Danny Miller

Miller, D. S. (April, 2001). When you really are the first responder on the scene. *Occupational Health and Safety*, 40-46.

## Lecture Series - biphasic defibrillation:

### Mike Blakeney, RN, MSN, EMT-Instructor

What is biphasic defibrillation? Do biphasic defibrillators even exist; I've never seen one. Why do things have to change just when I feel really comfortable using a conventional defibrillator?

Anyone renewing or going through initial ACLS may be thinking these or variations of the above questions. The American Heart Association's Guidelines 2000 for CPR and ECC that provide the rationale and science behind the changes in ACLS list biphasic defibrillation (at 200 joules or less) as a Class IIa recommendation (good to very good evidence that it is effective). We know that as night follows day, new ACLS recommendations bring us new drugs, equipment, and therapies. Look around your EMS service or Emergency Department; many of the changes are already in place.

What about these new biphasic defibrillators? Not new at all actually, they were pioneered in the 1950s and

were first used in Automatic Implantable Cardiac Defibrillators (AICDs) and are used in some Automatic External Defibrillators (AEDs). You are likely to already have had a patient who has received these shocks.

How do they work? With conventional defibrillators the shock or current flows from one paddle to the other in one direction (monophasic). Biphasic defibrillators deliver direct current but do so in two directions. During the first phase of biphasic defibrillation the charge flows in one direction identically to monophasic defibrillators. However, in milliseconds the current reverses its direction of flow. Hence the term biphasic. For yet unknown physiologic mechanisms this current reversal lowers the energy threshold for successful defibrillation.

The main advantage for biphasic defibrillation is that with lower energy levels to achieve defibrillation there is less physical damage to the heart and quicker return to normal pumping capacity. Ejection fraction often takes 72 hours post shock to return to baseline with high-energy shocks. Lower energy shocks are also less likely to cause skin burns.

There are currently three makers of biphasic defibrillators, Agilent (Heartstream), Medtronic Physio-Control, and Zoll. Agilent and Medtronic produce a biphasic truncated exponential or BTE device. Zoll produces a rectilinear biphasic or rectilinear device. Each of the two types have advantages depending on the resistance or impedance of the patient with neither clearly superior at this time.

Expect to use these biphasic defibrillators in the near future. Their operation is the same as with your current monophasic defibrillator with the exception of lower energy levels without escalating stacked shocks.

***Note: The EMC Program does not endorse any specific brand of defibrillator over any other. No endorsements were received from any manufacturer related to this article.***

## Certificate Class:

*Nancye Davis, MSN, Program Director*

The Corbin extended campus students will be entering their field internship during this month. They will be riding primarily in rural settings with longer transport times. They are completing the Advanced Cardiac Life Support class at this time. We wish them good luck and would like to voice our confidence in their ability to impact their communities.

Another certificate class is in its pre-requisite course work at this time. The Powell County certificate course is

well underway with its anatomy and physiology course. Ask any of the students and they'll be more than happy to tell

their stories. Dr. Neville Pohl, EMC Program Medical Director, is teaching the anatomy and physiology course in Stanton. Paramedic course work will begin in January with the first of three semesters of classes. This certificate class marks over twelve years of extended campus paramedic course work for ECU. If any of you know these folks in Corbin or Stanton, pat them on the back and encourage them. We wish them all good luck and much success in their endeavors.

### **Co-Op Opportunities (EMC 439):**

As a part of our BS degree, the Program is offering a cooperative education course. This course will allow students to obtain academic credit while working. There is a maximum amount of hours available but essentially, students will receive one hour of academic credit for every 80 hours of work time.

### **Kentucky EMS Educator's Association:**

<http://www.kaemse.org/>

The Program continues to support KAEMSA with web space and office support. It is hoped that the organization will be able to assist in providing classes during Rescue School 2002.

### **EMC Program Web-Site:**

<http://www.emc.eku.edu/>

The Program's web-site continues to be a means of disseminating information about the program. In the past six months, the program has made an effort to redesign and promote the web-sites for Advanced Medical Life Support (AMLS) and Preshospital Trauma Life Support (PHTLS).

One recent addition to our site was a link to up-to-date information about anthrax from various federal agencies. A CD-ROM is currently available for services to use in their in-service education programs about bioterrorism agents. The supply is limited but will be mailed free of charge as long as supplies last.

### **Epsilon Sigma Pi**

<http://www.emc.eku.edu/SEMCA/>

Epsilon Sigma Pi continues to grow. The most recent project has been to design a logo and lettering scheme for the



program's ambulance. This ambulance is used for practical skills work for several courses and will be used for public relations events.

### **AMLS:**

The Program will soon be offering another AMLS course. This course will be held on campus on January 12<sup>th</sup> - 13<sup>th</sup>, 2002. Participants who work in one of ECU's "service region" counties may qualify for a substantial discount to attend this course. A detailed list is included in the enclosed flier.



### **CPR Instructor Course:**

The Program sponsored a CPR instructor course. The course helped create three new CPR instructors for the area. This course was provided for "free" to members of Epsilon Sigma Pi.

### **New Equipment:**

One area in EMS that is ever changing is the degree and the types of technology utilized. In order to meet the needs of students that will function in the future, the Program has recently added the following equipment to its laboratory equipment list:

- advanced airway manikins
- digital video camera
- slide scanner
- Dell laptop computers

### **Scholarships Available:**

Anyone who is a fulltime student at ECU and whose major is in the College of Justice and Safety may be eligible for a \$1,000 per semester scholarship. For an application and instructions, please contact the Program's secretary at (859) 622 -1028.

### **12-lead EKG Instructor Course:**

Professor Danny Miller received a grant for and coordinated a 12-lead EKG instructor course that was held on April 4 - 5, 2001 for 29 participants. The instructor for the course was Gary Denton. Mr. Denton is nationally renowned for his 12-lead courses and is highly sought after.

### **PHTLS:**

<http://www.emc.eku.edu/PHTLS/>

Professor Danny Miller has been appointed as the new State Coordinator for Prehospital Trauma Life Support. In his role, he will coordinate the continued growth of PHTLS in Kentucky. Mr. Miller has been a Paramedic and trauma instructor for over 20 years. Any questions related to PHTLS can be directed to Mr. Miller directly or via the PHTLS web-site.

### **Site Visitor:**

Faculty member, Sandy Hunter has been accepted as site visitor by the national organization that accredits Paramedic programs.

### **Position Available:**

The Program is currently accepting applications from persons interested in serving as a faculty member for its Paramedic program. Faculty members are primarily responsible for teaching didactic and practical aspects of a Paramedic curriculum. Faculty members may also be responsible for instructing courses in related disciplines. Masters required, doctorate preferred.

### **Essential Qualifications**

1. Masters Degree
2. Current credentials as either Paramedic, RN, MD or DO
3. ACLS Instructor
4. Education or experience in out-of-hospital emergency care.

### **Desirable Qualifications**

1. Instructor certifications in: PALS (or PEPP), PHTLS (or BTL, TNCC), BCLS, EMD.
2. Education or experience in EMS quality improvement.
3. National Registry (for Paramedics)

### **Faculty and Staff Contacts**

Name	Telephone number	Email address
Mike Blakeney	622 - 6337	Mike.Blakeney@eku.edu
Nancye Davis	622 - 6341	Nancye.Davis@eku.edu
Mary Hall	622 - 1028	Paramedic.Program@eku.edu
Sandy Hunter	622 - 1030	Sandy.Hunter@eku.edu
Danny Miller	622 - 6340	Danny.Miller@eku.edu

### **Program's homepage is**

<http://www.emc.eku.edu/>

### **KBEMS**

Faculty members for the program are active at various levels of the Kentucky Board of EMS. Please free to contact any faculty member if you have concerns, questions or suggestions related to their specific area of efforts:

Faculty member	committee
Jimmy Cornelison	Board Member
Nancye Davis	Medical Standards Sub-Committee, Education (ALS)
Sandy Hunter	ALS Regulations
Danny Miller	Medical Standards Sub-Committee, Education (ALS)

### **On-line Courses:**

To better reach students, the Program continues to offer these on-line courses:

- EMC 200 - Introduction to Prehospital Advanced Life Support
- CHS 105 - Survey of Medical Terminology

### **Editorial:**

The entire faculty and student body wish to express our sympathy for and solidarity with the men and women who serve as Paramedics, Fire Fighters, Law Enforcement Officers, rescuer workers and others who have worked, suffered and died during the recent tragedies of September 11<sup>th</sup>. There has never been another time like this in our history. It is incumbent upon all of us to work together, help each other support the efforts of our nation.

### **Editor:**

Professor Sandy Hunter edits this newsletter. Comments from readers and submissions from alumni may be sent to the Editor via mail, fax or e-mail (Word or txt formats please). The EMC program reserves the right to include and or edit items based upon the judgement of the