

National EMS Management Curriculum committee report

Draft 2.1 short version: no Appendix 3, 4, 6 or cover 12/28/2006

page 1 of 11

An inaugural **National EMS Management Curriculum committee** meeting was held on October 31 and November 01 at the National Fire Academy. A follow-up work session was conducted December 14 through 16, 2006, as part of the FESHE meeting. Appendix 1 lists the attendees.

Under the charge of Bob Fleming, Chair of the National Fire Academy Board of Visitors, this Federal Advisory Committee Act compliant committee explored the idea of creating a model EMS Management curricula.

Under this charge, the group accomplished the following tasks.

SURVEY OF EXISTING BACHELOR PROGRAMS IN EMS MANAGEMENT

The committee reviewed the pre-meeting work done by NAEMSE and GWU to identify the current colleges and universities that offer a four year degree with a concentration in EMS Management. Of the 14 current EMS-related bachelor degree programs:

- Three programs offer an on-campus bachelor degree in EMS Management.
- Three programs offer a degree completion bachelor degree in EMS Management.

There are three versions of EMS Management degrees:

Comprehensive (Maryland, Pittsburgh and Florida): Majority of the program is provided through classes offered at the EMS-oriented department or program. More than 21 semester hours are classes covering EMS Management topics

Option (George Washington and St. Petersburg): EMS Management program is a major option within a more generalized degree. Option means that about 21 semester hours of a 160 hour degree program are EMS Management.

Some of the more general courses, like management, budgeting, marketing and public policy, are provided through the host degree. For example: Health Science for GWU and Public Safety for St. Petersburg.

Minor (Springfield MA): EMS Management program is offered as a concentration within a paramedic or emergency management degree. Between nine and 15 semester hours in EMS Management courses.

Appendix 2 provides a list the current bachelor degree programs that offer a concentration in EMS Management. There are another five EMS management bachelor degree programs that are on hiatus or under development.

NATIONAL FIRE ACADEMY PROFESSIONAL DEVELOPMENT MODEL

The National Fire Academy (NFA) has been involved in fire-based higher education and professional development since the creation of the Degrees at a Distance bachelor program in the 1970's:

http://www.usfa.dhs.gov/training/nfa/higher_ed/degree_programs/distance/

Contact Ed Kaplan ed.kaplan@dhs.gov for questions about the FESHE process
Contact Mike Ward mikeward@gwu.edu to report errors, omissions or corrections..

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Draft 2.1 short version: no Appendix 3, 4, 6 or cover 12/28/2006 page 2 of 11

This degree completion program has been offered through seven partner colleges and universities throughout the United States.

NFA expanded this mission in 1999 by starting the **Fire and Emergency Service Higher Education (FESHE) strategic direction**. NFA assembled interested faculty from fire-based associate and bachelor degree programs to work with fire service stakeholders to update the fire-based curricula that was established at the 1966 Wingspread Conference.

http://www.usfa.dhs.gov/training/nfa/higher_ed/feshe_direction.shtm

Working as a conduit, NFA provides an annual meeting at the Emmitsburg, Maryland, campus where interested academic and fire service members donated their time and talent to develop a model fire-based associate and bachelor curricula.

By 2002 the FESHE process had accomplished the following:

- 1) Model associate and bachelor fire-based curricula
 - a) Six associate level core courses
 - b) Seven associate level elective courses
 - c) Integration of the 13 existing Degree at a Distance bachelor level courses into the model curricula.
- 2) Thirteen associate-level model courses with:
 - a) Standardized title
 - b) Course description
 - c) Course outcomes
 - d) Course outline

During the 2002 conference, NFA had arranged a roundtable with the fire science textbook publishers. Pennwell, Fire Protection Publications, Delmar, Brady and NFPA provided representatives that committed to revise or produce textbooks that would meet the model course outcomes.

For Academic Year 2005-2006 five of the six associate level core courses have two or more FESHE oriented textbooks available. There are two textbooks with anticipated early 2007 release for the "Fire Behavior and Combustion" core course.

http://www.usfa.dhs.gov/training/nfa/higher_ed/model/

Many colleges have adopted the model associate-level curricula. Unrelated to the EMS Management Model curricula, the fire-based curricula has facilitated a coordination of fire certification training and academic education to encourage a seamless professional development opportunity.

The Virginia Community College Systems and the Department of Fire Programs are the first to accomplish this goal in 2005 through a standardized state-wide program.
http://www.vafire.com/higher_education/index.htm

The model bachelor-level curriculum is adopted as a component of the International Association of Fire Chief's Officer Development Handbook. As well as the Center for Public Safety Excellence's **Chief Fire Officer Designation**.
<http://www.cfainet.org/home/cfod/faq.asp>

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National EMS Management Curriculum committee report

Draft 2.1 short version: no Appendix 3, 4, 6 or cover 12/28/2006 page 3 of 11

Appendix 3 provides a list of the current EMS Management courses offered by the six colleges and universities.

CONSIDERING A NATIONAL EMS PROFESSIONAL DEVELOPMENT MODEL

After NFA staff provided an overview, history and description of the Fire and Emergency Service Higher Education (FESHE) process, the committee discussed the suitability of the FESHE process for EMS-oriented degrees.

This committee is focused on non-clinical academic programs that would lead to a bachelor degree in EMS management. Concern was expressed that the fire-based FESHE process may not be accepted by the third-service and for-profit ems organizations and leaders.

Extensive discussion about the dynamics of ems clinical and professional education, the role of the Department of Transportation, State EMS Training Directors, American Ambulance Association, National Association of EMTs and the emergency physician groups (NAMESP, AAOS and Eagles).

Not certain how an EMS Management curricula fits with the national EMT-B and EMT-P curricula or the 2008 Scope of Practice. Most of the clinical associate degrees in paramedicine do not provide the academic background that allows an easy progression to meet the university requirements for a bachelor degree (English, math, social sciences, etc.)

Some members strongly opposed to a federally mandated or regulated EMS Management curricula. Not much comfort implementing a National Fire Protection Association type of professional standard, like the NFPA 1021 Fire Officer I-II-III-IV model. Members noted that Maryland Fire and Rescue Institute made an attempt with this classification system (EMS Officer I, II, III and IV).

Committee agreed to use the FESHE process to develop a model EMS Management curricula.

DETERMINING LEVELS OF EMS MANAGEMENT

The committee developed working management level definitions, using public safety and ems industry practices. Four levels established:

EMS Supervisor: A crew chief or leader of a single unit or crew

EMS Manager: Manages more than one crew or supervisors

EMS Chief Officer: Oversees more than one manager, is responsible for a major component of an EMS organization, middle manager.

EMS Executive: Head of the organization or senior staff.

APPLYING EMS MANAGEMENT TO THE FESHE PROCESS

The committee took the fire-based triangle and developed a proposed EMS Professional Development Model. Appendix 4 provides additional details.

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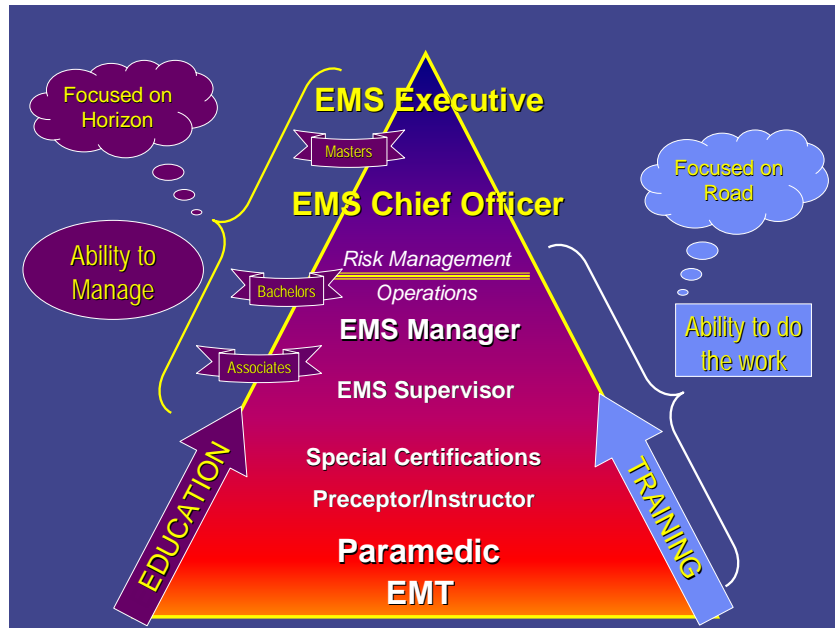


Figure 1: EMS Professional Development Model

ADDITION OF EMS MANAGEMENT INTO THE FESHE PROCESS

There was extensive discussion by the committee to identify the best methods of following the FESHE process. It appears that asking the **National Association of EMS Educators** <http://www.naemse.org> to participate as a partner in this endeavor provides both technical and organizational expertise.

Two recommendations to the National Fire Academy Board of Visitors:

- 1) A new committee, *National EMS Management Curriculum*, to be added under the FESHE Conference organization.
- 2) Addition of a National Association of EMS Educator position to be added to the FESHE Steering Committee, representing the EMS Management program.

DEVELOPMENT OF EMS MANAGEMENT COMPETENCIES

The committee reviewed the "National Professional Development Matrix" and, after discussion and deliberation, completed a first draft of what EMS Management competencies should be. Appendix 6 provides the working draft that was updated at the December meeting.

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National EMS Management Curriculum committee report

Draft 2.1 short version: no Appendix 3, 4, 6 or cover 12/28/2006

page 5 of 11

IDENTIFICATION OF CORE EMS COURSES

The focus of the December meeting was to add additional institutions and obtain input and feedback from invited subject matter experts. After reviewing the work done in November, the committee and subject matter experts worked to:

- a) Review/revise the EMS Management Competencies matrix
- b) Identify EMS Management concepts
- c) Propose core EMS course titles and descriptions

While the December group revised the EMS Management Competencies, they still need to be edited to reflect correct format for objective descriptions.

Dr. Walz recommended that the committee start with the fourteen attributes of an EMS system as outlined in the 1996 EMS Agenda for the Future.

<http://www.nhtsa.dot.gov/people/injury/ems/agenda/emsman.html>

After extensive discussion and small group work, the committee identified fifteen EMS management concepts:

- 1) Foundations
- 2) Human Resource Management
- 3) Management Theories
- 4) EMS Operations
- 5) Safety Risk Management
- 6) Education
- 7) Communications
- 8) Political Savvy
- 9) Research Methods
- 10) Financial/Budgeting
- 11) Leadership
- 12) Quality Management
- 13) Planning
- 14) Management Information Systems
- 15) Medical Direction

While the committee was working to transform the fourteen attributes and fifteen concepts into proposed core EMS courses other FESHE members made suggestions and provided feedback to the committee about process and the deliverables.

The committee identified seven proposed EMS courses:

Foundations of EMS Systems
EMS Operations
Human Resource Management
Management of EMS
Quality Management and Research
EMS Educator/Instruction
Safety/Risk Management

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Draft 2.1 short version: no Appendix 3, 4, 6 or cover 12/28/2006

page 6 of 11

EMS COURSE TITLES, DESCRIPTIONS AND RESOURCES

Foundations of EMS Systems

An overview of the design and operation of Emergency Medical Service Systems, delivery of services and the echelons of care. The history of EMS, the interface of public and private organizations and review of the various personnel who comprise these systems will be examined in relation to their impact on the health care delivery system.

Bruce Walz (2002) Introduction to EMS Systems. Delmar/Thompson Learning ISBN 0-7668-1984-1

John A. Brennan and Jon R. Krohmer editors (2005) Principles of EMS Systems, 3rd edition. Jones and Bartlett Publishers for the American College of Emergency Physicians ISBN 0-7637-3382-2

EMS Operations

Designed to expose the student to various field operation procedures. Topics include: medical incident command, resource deployment, interaction with other public safety and health care agencies, patient advocacy, field supervision of EMS operations.

There are no current books available, but there are books that are in development.

Human Resource Management

Principles of personnel management and process that contribute to the effectiveness of an EMS organization. Topics include: organizational employment planning, employment regulation, job analysis, performance assessment, recruitment and selection, training and development, employee/labor relations and compensation. Examines the supervisory process in relation to volunteers and career (paid) personnel with various levels of skill certification, medical control and the influence of the type of Emergency Health organization involved

Pynes, Joan E. (2004) Human Resources Management for Public and Nonprofit Organizations. Jossey Bass. ISBN 0787970786

Edwards, Stephen (2005) Fire Service Personnel Management, 2nd ed. Brady. ISBN 0131177664

Management of EMS

Course designed to expose students to the tools necessary to obtain maximum efficiency of an EMS agency. This course will provide students with a format to explore the management, regulatory and reimbursement issues facing EMS managers and operations directors.

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National EMS Management Curriculum committee report

Draft 2.1 short version: no Appendix 3, 4, 6 or cover 12/28/2006 page 7 of 11

Alexander E. Kuehl (ed) (2002) Prehospital Systems and Medical Oversight, 3rd edition. National Association of EMS Physicians ISBN 0-7872-7071-7

Dennis Compton and John Granito (2002) Managing Fire and Rescue Services. International City/County Management Association. ISBN 0-87326-128-3

Quality Management and Research

A review of historic and current research in Emergency Health Services. Selected studies will be reviewed and critiqued in terms of their content, methodological characteristics, and utility. Basic research principles, scientific inquiry and interpretation of professional literature are emphasized.

Lawrence Brown, Elizabeth Criss and N. Heramba Prasad (2002) An Introduction to EMS Research. Brady ISBN 0-13-018683-X

EMS Educator/Instruction

Analysis of educational and training needs relating to courses of EMS instruction. Special emphasis on conveying standards and guidelines while meeting the student and agency's needs. The role of agency-standard lesson plans; special content considerations for the several EMS teaching and learning settings. Dealing with barriers to effective education.

NAEMSE (2005) Foundations of Education: An EMS Approach. Mosby ISBN 0323028675

Melissa Alexander (2005) Foundations for the Practice of EMS Education. Prentice Hall ISBN 0131194356

Safety/Risk Management

A global overview of EMS injury prevention for EMS personnel and the community. Review of epidemiological patterns of injuries related to occupation, transportation, recreation, homelife, interpersonal violence and related incidents. Emphasis on prevention of injuries. Role of Emergency Medical Services in the field of injury control. Additionally the course will enhance the student's understanding of the role of public health and EMS.

Jonathan D. Kipp and Murray E. Loflin (1996) Emergency Incident Risk Management: A Safety and Health Perspective. Wiley ISBN 047128663X

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page 8 of 11

PROPOSED ACTION PLAN (November 2006 – September 2007)

November 2006

- Produce draft document and circulate to NAMESE, FESHE and academic organizational heads for comments.
- NAEMSE creates a peer-group of EMS Management curriculum committee.
- NFA adds NAEMSE position to FESHE steering committee
- Draft document: Outline of undergraduate degree program with proposed EMS management course titles.
- Comments collected by NFA, organized and distributed by GWU EHS.

December 2006

- Incorporate comments and produce Draft 2 with the in/out comments. Anticipate work meeting at NFA during the FESHE Committee meetings (December 14 – 16).
- SMEs invited to participate.
- NFA creates a National EMS Management Curriculum committee under FESHE

January 2007

- Send Draft 2 to organizational heads and academic institutions to solicit member comments. (MEIMS & ALIEMS attendees 2001-2006)
- Organizations produce one set of comments to NFA.
- Committee members identify which course they want to develop outcomes. You become the contact person for that course.

February 2007

- Complete final National EMS Management Curriculum Committee Report
- Start looking for resources and working on course outcomes.
- We may want to choose one or two courses that can quickly be completely developed by June.

March 2007

- Informational session at **EMS Today** (Baltimore)
- Committee members work on course outcomes.

April 2007

- Committee members work on course outcomes and (if possible) course outlines.
- Informational session at **Fire-Rescue Med** (Las Vegas)

June 2007

- Present curriculum, course description, course outcomes and (maybe) one or two completed courses at **FESHE annual conference** (Emmitsburg, Maryland).
- Informational session at **IAFF EMS** (Houston)

September 2007

- Present National EMS Management curriculum and course outlines at **National Association of EMS Educators annual meeting** (Hollywood, California)

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page 9 of 11

Appendix 1: Attendees

Attendees on October 31:

Bruce Walz, University of Maryland Baltimore County
Michael Ward, The George Washington University

Jeff Lindsey, National Association of EMS Educators
David Becker, IAFC EMS Section Executive Committee

Barb Klingensmith, Chair, National Fire Science Curriculum Committee – Bachelor's Committee

Bruce Evans, FESHE Steering Committee – Associate's EMS Degree Coordinator
Erik Gaull, NFA contract instructor for EMS courses

Ed Kaplan, Education Program Specialist
Rick Ziebart, Training Specialist, U. S. Fire Administration
Dave Bryson, U. S. Department of Transportation, Office of EMS
Gamunu Wijetunge, U. S. Department of Transportation, Office of EMS

Attendees on November 01:

Bruce Walz, University of Maryland Baltimore County
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Bruce Evans, FESHE Steering Committee – Associate's EMS Degree Coordinator
Erik Gaull, NFA contract instructor for EMS courses

Ed Kaplan, Education Program Specialist
Rick Ziebart, Training Specialist, U. S. Fire Administration

Attendees on December 14 through 16:

Bruce Walz, University of Maryland Baltimore County
Michael Ward, The George Washington University
Bob Seitz, University of Pittsburgh/Center for Emergency Medicine
Sebastian Wong, Las Positas College (California)
Angel Burba, Howard County Community College (Maryland)

Jeff Lindsey, National Association of EMS Educators
David Becker, IAFC EMS Section Executive Committee
Bruce Evans, FESHE Steering Committee – Associate's EMS Degree Coordinator

Don Lundy, National Association of EMT's [invited subject matter expert]
Bill Seifarth, National Association of State EMS Officers [invited subject matter expert]

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Draft 2.1 short version: no Appendix 3, 4, 6 or cover 12/28/2006 page 10 of 11

Appendix 2: Current institutions that offer a bachelor degree with EMS Management concentration.

University of Maryland at Baltimore County
Department of Emergency Health Services
Bachelor of Science in Emergency Health Services
Management track

On-campus undergraduate program.

On-line **MS in Emergency Health Sciences**

Administrative, Planning & Policy

Preventive Medicine and Epidemiology (some on-campus content)

Education

<http://ehs.umbc.edu/UMBCFrontPage.htm>

University of Florida (completely on-line)
M.E. Rinker Sr. School of Building Construction
Degree completion program

BS Fire and Emergency Services

Concentration in EMS Management

On-line **MS Fire and Emergency Services**

<http://www.registrar.ufl.edu/catalog/programs/majors/fire.html>

The George Washington University (completely on-line)
Emergency Health Services
Degree completion program

BSHS EMS Management

On-line **MSHS in Emergency Services Management**

http://www.gwumc.edu/healthsci/programs/ems_bs/

<http://home.gwu.edu/~mikeward/>

St. Petersburg College
College of Public Safety Administration
Bachelor Applied Science in Public Safety Administration
http://spcollege.edu/bachelors/cpsa_curr.php

University of Pittsburgh
School of Health and Rehabilitation Sciences

BS Emergency Medicine

<http://www.shrs.pitt.edu/CMS/Departments/EMProg.asp?id=186&secondid=359>

Springfield College
Springfield MA
School of Health Sciences and Rehabilitation Studies

BS Health Services Administration

Emergency Medical Services Management

<http://www.spfldcol.edu/homepage/hsrs.nsf/DCC0DBBEC0FAE5B5852571B2004F2443/456AD7B15B1CE32D852571BC006C3529?OpenDocument>

Sources: 2006 JEMS Platinum Guide, manual review of CoAEMSP accredited paramedic programs, response to queries posted by NAEMSE and GWU.

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Draft 2.1 short version: no Appendix 3, 4, 6 or cover 12/28/2006 page 11 of 11

Appendix 5: National EMS Management Curriculum Committee

2006 FESHE Committees

National EMS Management Curriculum Committee

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