

MEMORANDUM TO: Ogden College of Science and Engineering Curriculum Committee

Dr. Katie Algeo
Dr. Taha Alyousef
Dr. Doug Harper
Dr. Phil Lienesch
Dr. Jeremy Maddox

Dr. Michelle Jackson
Dr. Andy Mienaltowski
Dr. Les Pesterfield
Dr. Todd Willian

FROM: Kenneth Crawford, Chair

SUBJECT: Agenda for Thursday, November 1, 2018 4:00 p.m. in OCH 1022

A. OLD BUSINESS:

- I. Consideration of the minutes of the October 4, 2018 meeting.

B. NEW BUSINESS:

Type of item	Description of Item & Contact Information
Action	Proposal to Create a New Course MATH 099, Corequisite Support for Algebra, 1 Contact: Leslie Plumlee, leslie.plumlee@wku.edu , x6210
Action	Proposal to Create a New Course EMDS 400, Emergency Management Policy and Practices, 3 hrs. Contact: David Oliver, david.oliver@wku.edu , x54181
Action	Proposal to Create a New Course EMDS 401, Natural and Technological Disaster Risks, 3 hrs. Contact: David Oliver, david.oliver@wku.edu , x54181
Action	Proposal to Create a New Course EMDS 402, Resiliency in Response to Terrorism and Violence, 3 hrs. Contact: David Oliver, david.oliver@wku.edu , x54181
Action	Proposal to Create a New Course EMDS 403, Advanced Disaster Planning, Management, and Preparedness, 3 hrs. Contact: David Oliver, david.oliver@wku.edu , x54181
Action	Proposal to Create a New Course EMDS 404, Trends in Disaster Preparedness and Management, 3 hrs. Contact: David Oliver, david.oliver@wku.edu , x54181
Action	Proposal to Create a New Certificate Program Emergency Management Disaster Science, 15-18 hrs. Contact: David Oliver, david.oliver@wku.edu , x54181

C. OTHER BUSINESS

Members Present:

Dr. Katie Algeo
Dr. Taha Alyousef
Dr. Doug Harper
Dr. Phil Lienesch
Dr. Jeremy Maddox

Dr. Melanie Autin for Dr. Michelle Jackson
Dr. Andy Mienaltowski
Dr. Les Pesterfield
Dr. Todd Willian

FROM: Ken Crawford, Chair

The meeting was called to order at 4:00pm.

OLD BUSINESS:

Autin/Pesterfield moved to approve of the minutes of the September 6, 2018 meeting. Motion passed.

NEW BUSINESS:

Consent Agenda

Pesterfield/Autin moved to move all Department of Psychological Sciences proposals from consent to action for discussion. Motion passed.

Action Agenda

Chemistry Department

Pesterfield/Autin moved to approve Proposal to Revise a Program: Ref. 623, Major in Chemistry. Motion passed with friendly amendment.

Department of Psychological Science

Mienaltowski/Autin moved to approve Proposal to Revise a Program: Ref. 747 and 747E, Psychological Sciences. Motion was approved by a 6 to 3 vote.

Pesterfield/Autin moved to bundle and approve Proposals to Revise Course Catalog Listings: PSYS 290, PSYS 360, PSYS 490. Motion approved.

Maddox/Autin motioned to approve Proposal to Revise Course Prerequisites/Corequisites: PSYS 362. Motion approved with friendly amendment.

OTHER BUSINESS:

Willian/Autin motioned to approve electing Dr. Doug Harper as the Ogden UCC Rep and Dr. Scott Grubbs as the alternate. Motion approved.

Adjourned 4:35pm

(Action Item)

Proposal to Create a New Course:
Ogden College
Department/Unit: Mathematics

Section 1: Proponent Contact Information

- 1.1 Name/Title:** Leslie Plumlee
- 1.2 Email address:** leslie.plumlee@wku.edu
- 1.3 Phone #:** 270-745-6210

Section 2: Course Catalog Information

- 2.1 Course prefix (subject area) and number:** MATH 099
- 2.2 Course CIP code:** 27.0101
- 2.3 Course title:** Corequisite Support for Algebra
- 2.4 Abbreviated Course title:** Coreq Support for Algebra
- 2.5 Credit hours/Variable credit:** 1
- 2.6 Repeatability:** N/A
- 2.7 Course Term: Is this course intended to span more than a single term?**
YES NO
- 2.8 Course Catalog Description:** Corequisite academic support for students in MA 115C, MA 116C, or MATH 123. Topics include functions, graphs and fundamental concepts of algebra.
- 2.9 Prerequisite/Corequisites/Restrictions:** Corequisites: One of the following: (MA 115C or MA 116C) and (Math ACT <20 and MPE <12) or MATH 123 and (Math ACT <22 and MPE <14)
- 2.10 Additional Enrollment Requirements:** N/A
- 2.11 Other Special Course Requirements:** Exams for this course will be administered outside the scheduled class time.
- 2.12 Grade Type:** Standard
- 2.13 Schedule Type:** Lab

Section 3: Description of proposed course

- 3.1 Course Content Summary:** This course will build basic to intermediate algebra skills via adaptive learning software, with classroom support from graduate students in Mathematics.
- 3.2 Learning Outcomes:** Upon successful completion of this course, students should be able to:
- Solve linear and quadratic equations
 - Solve linear and absolute value inequalities
 - Write and graph linear equations with two variables
 - Factor algebraic expressions
 - Evaluate polynomial expressions and perform polynomial operations
 - Evaluate functions for specified values
 - Perform operations with rational expressions
 - Write radical expressions in simplest radical form
- 3.3 Assessment/Evaluation:** Students will progress through adaptive learning software to develop skills. When their work indicates mastery of assigned topics, the students will take proctored exams to verify that mastery has been achieved.

Section 4: Rationale

- 4.1 Reason for developing this proposed course:** Formerly, students who lacked the necessary preparation (as determined by an inadequate standardized test score) for admission to MATH 115, MATH 116, MATH 123 would enroll in Basic Algebra (DMA 055C) or Intermediate Algebra (DMA 096C) for remediation. Pursuant to the Council on Post-Secondary Education directive that freshmen be admitted directly into credit-bearing courses, this option will no longer exist as of Fall 2019. This course will provide developmental-level remediation to students concurrent with their enrollment in the credit-bearing 100 level courses.
- 4.2 Relationship to similar courses offered by other university departments/units:**
- Do any other courses already being offered by other university departments/units share content with this proposed course? YES NO
 - Are any of the proposed pre/co-requisites for this course offered by another university department/unit? YES NO

Section 5: Projected Enrollments/Resources

- 5.1 How many students per section are expected to enroll in this proposed course?** 30

5.2 How many sections of this course per academic year will be offered? 15

5.3 How many students per academic year are expected to enroll? 400-500

5.4 How were these projections calculated? Explain any supporting evidence/data you have for arriving at these projections. Enrollment trends in DMA 055C and DMA 096C for the past three academic years were used for estimation.

5.5 Proposed method of staffing: The lab sections will be staffed with Mathematics Graduate Assistants with oversight by a designated faculty member. Funding for additional graduate assistantships is being requested through Ogden College.

5.6 Instructional technology resources: The department currently has one classroom equipped with 30 desktop computers, which will house this course. If enrollments exceed initial estimates, access to additional classrooms with computers may be needed.

5.7 Library resources: Will this proposed course require the use of library resources (books, journals, reference materials, audio-visual materials, electronic databases, etc.)? YES NO

Section 6: Proposed term for implementation: Fall 2019

Section 7: Supplemental/Supporting Documentation:

Proposal Date: August 6, 2018

**Ogden College of Science and Engineering
Office of the Dean
Proposal to Create a New Course
(Action Item)**

Contact Person: Dr. David E. Oliver david.oliver@wku.edu 270-745-4181

1. Identification of proposed course:

- 1.1 Course prefix (subject area) and number: EMDS 400
- 1.2 Course title: Emergency Management Policy and Practices
- 1.3 Abbreviated course title: EM Policy and Practices

- 1.4 Credit hours: 3.0 Variable credit (yes or no) No
- 1.5 Grade type: Standard Letter Grade
- 1.6 Prerequisites/co-requisites: None
- 1.7 Course description:

Provides an in-depth look at the history of disaster response and emergency management within the U.S. and globally. Focuses on the Incidental Command System and the integration of incident management across local, state, federal and international response agencies.

2. Rationale:

- 2.1 Reason for developing the proposed course:

This course is being developed as a critical component of an under graduate level certificate program in Emergency Management Disaster Science. There is a demonstrated need to provide an advanced technical preparedness and management curriculum that will enhance the abilities of graduates to properly apply principals of emergency management in all phases of disaster preparedness and response. This course is the foundation upon which the balance of the core components of the certificate program will reside.

- 2.2 Projected enrollment in the proposed course:

The projected initial enrollment would be 12-15 students.

- 2.3 Relationship of the proposed course to courses now offered by the department:

- 2.4 Relationship of the proposed course to courses offered in other departments:

There is not a direct relationship to any existing courses in other departments.

2.5 Relationship of the proposed course to courses offered in other institutions:

There are other programs that offer similar focus area including ones offered by Eastern Kentucky University. However, the courses reviewed are developed using a program management approach; this course as well as the other courses in the proposed certificate program are designed from a science and engineering perspective, resulting in the development of an advanced emergency management acumen, presented from a technical process prospective.

3. Discussion of proposed course:

3.1 Schedule type:

Cohort Hybrid Format. Initially course would be offered once per year in the fall semester. With increased demand additional offerings may be warranted.

3.2 Learning Outcomes:

Upon successful completion of this course, the student will

- Describe the historical evolution of incident management on a global scale from World War I to present.
- Demonstrate the ability to effectively apply the Incident Command System (ICS) to a variety of situations including events planning and incident response.
- Explain the function and application of each ICS position including command staff, general staff, branch, division, group, taskforce, strike team, and unit.
- Relate the prescribed escalation of command from local, state, federal as defined in the National Incident Management System (NIMS) and National Response Framework.
- Construct a strategic plan designed to facilitate the development of effective partnerships among critical response partners.
- Apply the Five-Phases of Emergency Management to a prescribed scenario involving a specific location and hazard category.

3.3 Content outline:

A: Introduction to Emergency Management

B: Evolution of Emergency Management Practice from a Global Perspective

C: Incident Command System

- Introduction to the Incident Command System
- Incident Command System for Single Resources and Initial Action Incidents
- Intermediate Incident Command System for Expanding Incidents
- Advanced Incident Command System for Command and General Staff
- National Incident Management System (NIMS) an Introduction
- National Response Framework

D: Establishing Critical Resource Partnerships in Emergency Management

E: Application of the Five Phases of Emergency Management

3.4 Student expectations and requirements:

Students admitted to the program must demonstrate an ability to successfully function in a team environment, coupled with strong analytical skills, and a willingness to partner with other students from a variety of academic and professional backgrounds to focus on development of sound strategic goals and tactical implementation plans to resolve complex issues related to disaster management.

Students must meet all university admission requirements

3.5 Tentative texts and course materials:

FEMA Emergency Management Institute (EMI) ICS Curriculum

Introduction to Emergency Management (Sixth Edition) 2017

Author(s): George Haddow, Jane Bullock and Damon P. Coppola

ISBN: 978-0-12-803064-6

4. Resources:

- 4.1 Library resources: Online reference resources
- 4.2 Computer resources: PC or Mac Based Notebook or Tablet

5. Budget implications:

5.1 Proposed method of staffing:

Initial course development will leverage existing full time or adjunct faculty and/or staff utilizing stipends to compensate for course development time above regularly assigned course/work load. Adjunct faculty will be selected and assigned in compliance with current Academic Affairs and Ogden College of Science and Engineering Policies.

At the point that course registration numbers reach a sustained level 15 students, a full time faculty position may be needed to adequately support and grow this critically important program of study.

5.2 Special equipment needed: None

5.3 Expendable materials needed: Copy costs for essential course materials.

5.4 Laboratory materials needed: None

6. Proposed term for implementation:

Proposed 1st Cohort delivery in Fall 2019

7. Dates of prior committee approvals:

Office of the Dean	_____
Ogden College College Curriculum Committee	_____
Professional Education Council (if applicable)	_____
General Education Committee (if applicable)	_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Proposal Date: August 6, 2018

Ogden College of Science and Engineering
Office of the Dean
Proposal to Create a New Course
(Action Item)

Contact Person: Dr. David E. Oliver david.oliver@wku.edu 270-745-4181

1. Identification of proposed course:

- 1.1 Course prefix (subject area) and number: **EMDS 401**
- 1.2 Course title: Natural and Technological Disaster Risks
- 1.3 Abbreviated course title: Natural and Tech Disaster Risks

- 1.4 Credit hours: 3.0 Variable credit (yes or no) No
- 1.5 Grade type: Standard Letter Grade
- 1.6 Prerequisites/co-requisites: EMDS 400 or Permission of Instructor
- 1.7 Course description: Technical aspects of planning for and responding to natural and technological hazards across applicable science and engineering disciplines.

2. Rationale:

- 2.1 Reason for developing the proposed course:

This course is being developed as a critical component of an undergraduate level certificate program in Emergency Management Disaster Science. There is a demonstrated need to provide an advanced technical preparedness and management curriculum that will enhance the abilities of students to properly apply principals of emergency management in all phases of disaster preparedness and response. This course focuses on the most common natural disasters, and technological hazard types that have historically caused the greatest loss of life and property, as well as disruption of critical infrastructure.

- 2.2 Projected enrollment in the proposed course:

The projected initial enrollment would be 12-15 students.

- 2.3 Relationship of the proposed course to courses now offered by the department:

None

- 2.4 Relationship of the proposed course to courses offered in other departments:

There is not a direct relationship to any existing courses in other departments.

- 2.5 Relationship of the proposed course to courses offered in other institutions:

There are other programs that offer similar focus area including ones offered by Eastern Kentucky University. However, the courses reviewed utilize a program management approach; this course as well as the other courses in the proposed certificate program are developed from a science and engineering perspective, resulting in the development of an advanced emergency management acumen, presented from a technical process prospective.

3. Discussion of proposed course:

3.1 Schedule type:

Initially course would be offered once per year in the fall semester. With increased demand additional offerings may be warranted.

3.2 Learning Outcomes:

Upon successful completion of this course, the student will

- Analyze historical accounts of significant natural and technological disasters on a global basis, to gain insight as to the aftermath impacts on modern emergency management practices.
- Describe potential impacts of naturally occurring events including meteorological and geological phenomenon on people, critical infrastructure, and the environment.
- Examine and correctly interpret leading indicative data regarding potential risks of events, probability of occurrence, and predictability of timing, scope, etc. to formulate prevention and mitigation strategies.
- Evaluate and correctly document resource needs for a prescribed incident type and scope, using FEMA Incident Management process.
- Actively collaborate in a group environment to develop a comprehensive hazard assessment and response pre-plan for a randomly selected event and location utilizing basic and advanced data collection resources and methods.

3.3 Content outline:

A: Historical review of major global disasters and their impacts.

B: Natural Hazards Study

- Hurricanes, Cyclones, and Typhoons
- Thunderstorms, Lightening and Tornados
- Flooding
- Intense Heat, Drought
- Winter Weather-Snow, Ice, Extreme Cold
- Volcanos, Earthquakes, and Subsidence

C: Exploration of Primary Technological Hazards

- Fires – Structural
- Fires – Transportation (Airplanes, Ships, Commercial Vehicles)
- Fires – Woodland, Brush
- Hazardous Materials Incidents
- Structural Failures / Collapse
- Major Industrial Incidents
- Aircraft Emergencies and Crashes
- Maritime Disasters

D: Technical Application of Risk Assessment Tools

E: Developing Effective Target Hazard Plan Elements

3.4 Student expectations and requirements:

Students admitted to the program must demonstrate an ability to successfully function in a team environment, coupled with strong analytical skills, and a willingness to partner with other students from a variety of academic and professional backgrounds to focus on development of sound strategic goals and tactical implementation plans to resolve complex issues related to disaster management.

Students must meet all university admission requirements

3.5 Tentative texts and course materials:

FEMA Emergency Management Institute (EMI) ICS Curriculum

FEMA Risk Assessment Applications

Hazard Mitigation and Preparedness: An Introductory Text for Emergency Management and Planning Professionals, Second Edition
Anna K. Schwab, Dylan Sandler, David J. Brower
ISBN 9781466595569

Quantitative Risk Assessment (QRA) for Natural Hazards
Edited by Nasim Uddin, Ph.D., P.E.; and Alfredo H. S. Ang, Ph.D.
ISBN (PDF): 978-0-7844-7637-6

4. Resources:

- 4.1 Library resources: Online reference resources
- 4.2 Computer resources: PC or Mac Based Notebook or Tablet

5. Budget implications:

5.1 Proposed method of staffing:

Initial course development will leverage existing full time or adjunct faculty and/or staff utilizing stipends to compensate for course development time above regularly assigned course/work load. Adjunct faculty will be selected and assigned in compliance with current Academic Affairs and Ogden College of Science and Engineering Policies.

At the point that course registration numbers reach a sustained level 15 students, a full time faculty position may be needed to adequately support and grow this critically important program of study.

- 5.2 Special equipment needed: None
- 5.3 Expendable materials needed: Copy costs for essential course materials.
- 5.4 Laboratory materials needed: None

6. Proposed term for implementation:

Proposed 1st Cohort delivery Fall 2019

7. Dates of prior committee approvals:

Office of the Dean	_____
Ogden College Curriculum Committee	_____
Professional Education Council (if applicable)	_____
General Education Committee (if applicable)	_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Proposal Date: August 6, 2018

Ogden College of Science and Engineering
Office of the Dean
Proposal to Create a New Course
(Action Item)

Contact Person: Dr. David E. Oliver david.oliver@wku.edu 270-745-4181

1. Identification of proposed course:

- 1.1 Course prefix (subject area) and number: **EMDS 402**
- 1.2 Course title: Resiliency in Response to Terrorism and Violence
- 1.3 Abbreviated course title: Resiliency in Response to Terrorism and Violence
- 1.4 Credit hours: 3.0 Variable credit (yes or no) No
- 1.5 Grade type: Standard Letter Grade
- 1.6 Prerequisites/co-requisites: EMDS 400 and EMDS 401 or Permission of Instructor
- 1.7 Course description:

Explores issues emerging from acts of terror and extreme violence, including the impact on organizations and society. Examines practical approaches to resiliency assessment including risk identification, prevention initiatives, impact analysis, response, and recovery planning.

2. Rationale:

- 2.1 Reason for developing the proposed course:

This course is being developed as a critical component of an undergraduate level certificate program in Emergency Management Disaster Science. There is a demonstrated need to provide an advanced technical preparedness and management curriculum that will enhance the abilities of graduates to properly apply principals of emergency management in all phases of disaster preparedness and response. This course focuses on the complex and dynamic problems associated with acts of terrorism and violence and the potential impacts on people and infrastructure.

- 2.2 Projected enrollment in the proposed course:

The projected initial enrollment would be 12-15 students.

- 2.3 Relationship of the proposed course to courses now offered by the department:

None

2.4 Relationship of the proposed course to courses offered in other departments:

There is not a direct relationship to any existing courses in other departments.

2.5 Relationship of the proposed course to courses offered in other institutions:

There are other programs that offer similar focus area including ones offered by Eastern Kentucky University. However, the courses reviewed are presented from a program management approach, this course as well as the other courses in the proposed certificate program are designed from a science and engineering perspective, resulting in the development of an advanced emergency management acumen, presented from a technical process prospective.

3. Discussion of proposed course:

3.1 Schedule type:

Cohort Hybrid Format. Initially course would be offered once per year in the spring semester. With increased demand additional offerings may be warranted.

3.2 Learning Outcomes:

Upon successful completion of this course, the student will

- Research historical accounts of acts of terrorism and violence on a global basis, and assess direct impacts on life, infrastructure, and environment, as well as indirect impacts such as costs of mitigation efforts, effects on commerce, and impacts on ordinary citizens.
- Describe the motivational elements that promote a person(s) to plan and execute acts of terror and/or violence.
- Conceptualize the global evolution of modern day terrorism.
- Recognize the broad and ever changing dynamics of terror tactics and the broad spectrum of violence mechanisms available to terrorism actors, and their potential impacts.
- Explore advances in technologies and practices aimed at detecting potential terror actors and/or their mechanisms for perpetrating acts of terror.

3.3 Content outline:

A: Historical review of major acts of terrorism and violence.

B: Motivational factors involved in Terrorist Acts

C: Dynamic Evolution of Global Terrorism

C: Mechanisms of Terror Attacks

- Explosives
- Arson/Incendiary Devices
- Biological Agents
- Chemicals as Weapons
- Nuclear Threats
- Armed Attacks
- Kidnappings and Hostage Taking
- Hijacking/Skyjacking
- Use of Vehicles and Machinery in Attacks
- Agricultural Terrorism
- Cyber Attacks

D: Application of Science and Technology in Prevention of and Response to Acts of Terror

- Assessing Infrastructure Vulnerability
- Concepts of Passive Hardening
- Visual Monitoring and Alerting Systems
- Detection Systems for Explosives and Chemicals
- Protection of Large Public Events and Venues

E: Development and Application of Counter Terrorism Policies, Procedures, and Training for Governmental, Business, Industry, and the General Public.

3.4 Student expectations and requirements:

Students admitted to the cohort must demonstrate an ability to successfully function in a team environment, coupled with strong analytical skills, and a willingness to partner with other students from a variety of academic and professional backgrounds to focus on development of sound strategic goals and tactical implementation plans to resolve complex issues related to disaster management.

Students must meet all requirements for entrance requirements

3.5 Tentative texts and course materials:

The Science and Technology of Counterterrorism - 1st Edition
Author: Carl Young – 2014 Butterworth-Heinemann
Published Date: 12th March 2014
ISBN: 9780124200562

4. Resources:

4.1 Library resources: Online reference resources

4.2 Computer resources: PC or Mac Based Notebook or Tablet

5. Budget implications:

5.1 Proposed method of staffing:

Initial course development will leverage existing full time or adjunct faculty and/or staff utilizing stipends to compensate for course development time above regularly assigned course/work load. Adjunct faculty will be selected and assigned in compliance with current Academic Affairs and Ogden College of Science and Engineering Policies.

At the point that course registration numbers reach a sustained level 15 students, a full time faculty position may be needed to adequately support and grow this critically important program of study.

5.2 Special equipment needed: None

5.3 Expendable materials needed: Copy costs for essential course materials.

5.4 Laboratory materials needed: None

6. Proposed term for implementation:

Proposed 1st Cohort delivery Spring 2020

7. Dates of prior committee approvals:

Office of the Dean	_____
Ogden College Curriculum Committee	_____
Professional Education Council (if applicable)	_____
General Education Committee (if applicable)	_____
Undergraduate Curriculum Committee	_____
University Senate	_____

Proposal Date: August 6, 2018

**Ogden College of Science and Engineering
Office of the Dean
Proposal to Create a New Course
(Action Item)**

Contact Person: Dr. David E. Oliver david.oliver@wku.edu 270-745-4181

1. Identification of proposed course:

- 1.1 Course prefix (subject area) and number: **EMDS 403**
- 1.2 Course title: Advanced Disaster Planning, Management, and Preparedness
- 1.3 Abbreviated course title: Adv Disaster Planning and Mgt
- 1.4 Credit hours: 3.0 Variable credit (yes or no) No
- 1.5 Grade type: Standard Letter Grade
- 1.6 Prerequisites/co-requisites: EMDS 400, 401 and 402 or Permission of Instructor
- 1.7 Course description: Requires application of key concepts to complete emergency management plans spanning all phases of emergency management.

2. Rationale:

- 2.1 Reason for developing the proposed course:

This course is being developed as a critical component of an undergraduate level certificate program in Emergency Management Disaster Science. There is a demonstrated need to provide an advanced technical preparedness and management curriculum that will enhance the abilities of graduates to properly apply principals of emergency management in all phases of disaster preparedness and response. This course focuses proper application of emergency planning practices in development of specific plans, practices, procedures, and training to assure quality elements are in place in a comprehensive emergency management structure.

- 2.2 Projected enrollment in the proposed course:

The projected initial enrollment would be 12-15 students.

- 2.3 Relationship of the proposed course to courses now offered by the department:

None

- 2.4 Relationship of the proposed course to courses offered in other departments:

There is not a direct relationship to any existing courses in other departments.

2.5 Relationship of the proposed course to courses offered in other institutions:

There are other programs that offer similar focus area including ones offered by Eastern Kentucky University. However, the courses reviewed are presented from a program management approach, this course as well as the other courses in the proposed certificate program are designed from a science and engineering perspective, resulting in the development of an advanced emergency management acumen, presented from a technical process prospective.

3. Discussion of proposed course:

3.1 Schedule type:

Initially course would be offered once per year in the spring semester. With increased demand additional offerings may be warranted.

3.2 Learning Outcomes:

- Upon successful completion of this course, the student will
- Apply advanced technical tools and resources that are vital for the development of functional strategic plans for all Five Phases of Emergency Management: Prevention, Mitigation, Planning, Preparedness, Response, and Recovery.
- Demonstrate the ability to gather accurate data regarding potential hazards,
- Perform analysis to quantify the associated risks from potential hazards data
- Develop balanced, effective policy, procedures, plans, training methodologies, and communications to accomplish identified strategic goals.

3.3 Content outline:

A: Selection and Application of Risk Assessment Instruments

B: Critical Data Gathering and Analysis for Emergency Management Planning

Content outline(Cont):

C: Facility/Organizational Specific Planning

Developing Facility Emergency Plans

- Evacuation Planning and Execution
- Shelter in Place Plans
- Lockdown – Violence Response Plans
- Relocation / Reunification Planning
- Fire/Medical Response Plan Options
- Facility Continuity of Operations Planning

D: Municipal Emergency Planning

- Developing Emergency Management Plans
- Hazard Mitigation Planning Process
- Disaster Recovery/Continuity of Operations Plans

E: Developing a Comprehensive Emergency Management Training Program

F: Designing Effective Emergency Drills and Exercises

G: Post Incident / Exercise Debriefing and After Action Report Preparation

3.4 Student expectations and requirements:

Students admitted to the program must demonstrate an ability to successfully function in a team environment, coupled with strong analytical skills, and a willingness to partner with other students from a variety of academic and professional backgrounds to focus on development of sound strategic goals and tactical implementation plans to resolve complex issues related to disaster management.

Students must meet all university entrance requirements.

3.5 Tentative texts and course materials:

Crisis Management and Emergency Planning: Preparing for Today's Challenges
Michael J. Fagel, Ph.D. CEM - ISBN 9781466555051
December 4, 2013 by CRC Press

4. Resources:

4.1 Library resources: Online reference resources

4.2 Computer resources: PC or Mac Based Notebook or Tablet

5. Budget implications:

5.1 Proposed method of staffing:

Initial course development will leverage existing full time or adjunct faculty and/or staff utilizing stipends to compensate for course development time above regularly assigned course/work load. Adjunct faculty will be selected and assigned in compliance with current Academic Affairs and Ogden College of Science and Engineering Policies.

At the point that course registration numbers reach a sustained level 15 students, a full time faculty position may be needed to adequately support and grow this critically important program of study.

5.2 Special equipment needed: None

5.3 Expendable materials needed: Copy costs for essential course materials.

5.4 Laboratory materials needed: None

6. Proposed term for implementation:

Proposed 1st Cohort delivery Spring 2020

7. Dates of prior committee approvals:

Office of the Dean

Ogden College Curriculum Committee

Professional Education Council (if applicable)

General Education Committee (if applicable)

Undergraduate Curriculum Committee

University Senate

Proposal Date: August 6, 2018

**Ogden College of Science and Engineering
Office of the Dean
Proposal to Create a New Course
(Action Item)**

Contact Person: Dr. David E. Oliver david.oliver@wku.edu 270-745-4181

1. Identification of proposed course:

- 1.1 Course prefix (subject area) and number: **EMDS 404**
- 1.2 Course title: Trends in Disaster Preparedness and Management
- 1.3 Abbreviated course title: Trends in Disaster Preparedness
- 1.4 Credit hours: 3.0 Variable credit (yes or no) No
- 1.5 Grade type: Standard Letter Grade
- 1.6 Prerequisites/co-requisites: EMDS 500, 501 and 502 or Permission of Instructor
- 1.7 Course description:

Guided discussions of research into the elements that comprise current practices in emergency management.

2. Rationale:

- 2.1 Reason for developing the proposed course:

This course is being developed as a critical component of an undergraduate level certificate program in Emergency Management Disaster Science. There is a demonstrated need to provide an advanced technical preparedness and management curriculum that will enhance the abilities of students to properly apply principals of emergency management in all phases of disaster preparedness and response. This course focuses on recent events and current trends in preparedness and emergency management.

- 2.2 Projected enrollment in the proposed course:

The projected initial enrollment would be 10-12 students.

- 2.3 Relationship of the proposed course to courses now offered by the department:

None

- 2.4 Relationship of the proposed course to courses offered in other departments:

There is not a direct relationship to any existing courses in other departments.

- 2.5 Relationship of the proposed course to courses offered in other institutions:

There are other programs that offer similar focus area including ones offered by Eastern Kentucky University. However, the courses reviewed are presented from a program management approach, this course as well as the other courses in the proposed certificate program are designed from a science and engineering prospective, resulting in the development of an advanced emergency management acumen, presented from a technical process prospective.

3. Discussion of proposed course:

3.1 Schedule type:

Cohort Hybrid Format. Initially course would be offered once per year in a summer session. With increased demand additional offerings may be warranted.

3.2 Learning Outcomes:

Upon successful completion of this course, the student will

- Demonstrate means and methods to gather germane data and conduct research focused on emerging issues in emergency management.
- Explore significant global events that involved natural and/or technological hazard components, and organize key lessons learned, and proposed methods for integration of findings into effective policy and/or procedures.
- Examine changing dynamics of terror related acts and the effects of preparedness and mitigation practices on the frequency and severity of outcomes.
- Analyze after action reports from significant global disasters, and develop application guides based on key considerations.

3.3 Content outline:

A: Introduction to Advanced Research Techniques and Resources

B: Natural Disaster Events Review and Discussion

C: Incidents Involving Technological Hazards Review and Discussion

D: Changing Dynamics of Terrorism with Focus on Recent Incidents and Projected Evolution

E: Identifying and Utilizing Key Resources through Engaged Partnerships

3.4 Student expectations and requirements:

Students admitted to the program must demonstrate an ability to successfully function in a team environment, coupled with strong analytical skills, and a willingness to partner with other students from a variety of academic and professional backgrounds to focus on development of sound strategic goals and tactical implementation plans to resolve complex issues related to disaster management.

Students must meet all university admission requirements

3.5 Tentative texts and course materials:

None

4. Resources:

4.1 Library resources: Online reference resources

4.2 Computer resources: PC or Mac Based Notebook or Tablet

5. Budget implications:

5.1 Proposed method of staffing:

Initial course development will leverage existing full time or adjunct faculty and/or staff utilizing stipends to compensate for course development time above regularly assigned course/work load. Adjunct faculty will be selected and assigned in compliance with current Academic Affairs and Ogden College of Science and Engineering Policies.

At the point that course registration numbers reach a sustained level 15 students, a full time faculty position may be needed to adequately support and grow this critically important program of study.

5.2 Special equipment needed: None

5.3 Expendable materials needed: Copy costs for essential course materials.

5.4 Laboratory materials needed: None

6. Proposed term for implementation:

Proposed 1st delivery Summer 2020

7. Dates of prior committee approvals:

Office of the Dean

Ogden College Curriculum Committee

Professional Education Council (if applicable)

General Education Committee (if applicable)

Undergraduate Curriculum Committee

University Senate

**Ogden College of Science and Engineering
Office of the Dean
Proposal to Create a New Certificate Program
(Action Item)**

Contact Person: Dr. David E. Oliver, Director EHS/Emergency Manager
David.Oliver@wku.edu (270) 745-4181

1. Identification of program:

- 1.1 Program title: Emergency Management Disaster Science
- 1.2 Required hours in program: 15-18
- 1.3 Special information:
- 1.4 Catalog description: Certificate in Emergency Management Disaster Science
- 1.5 Classification of Instructional Program Code (CIP): 43.0302 Crisis/Emergency/Disaster Management.

2. Learning outcomes of the proposed certificate program:

General:

- Increase the readiness of public and private sector leaders to more effectively plan for and respond to emergencies.
- Provide students with a strong technical acumen regarding the risks posed to people, infrastructure, and the environment from Natural, Technological, and People Caused Disasters.
- Provide students with a strong skill set in modern emergency management that can stand alone or be combined with their chosen academic and/or professional pursuits to provide an enhanced credential that results in increase hire-ability and/or promote-ability.
- Provide both scientific inquiry and practical application exposure that prepare the student with an immediate readiness to function in complex emergency management situations, through an inclusive and rigorous program of study.

EMDS 400: Emergency Management Policy and Practices.

Upon successful completion of the course EMDS 400 - Emergency Management Policy and Practices. The student will:

- Describe the historical evolution of incident management on a global scale from World War I to present.
- Demonstrate the ability to effectively apply the Incident Command System (ICS) to a variety of situations including events planning and incident response.
- Explain the function and application of each ICS position including command staff, general staff, branch, division, group, taskforce, strike team, and unit.
- Relate the prescribed escalation of command from local, state, federal as defined in the National Incident Management System (NIMS) and National Response Framework.

- Construct a strategic plan designed to facilitate the development of effective partnerships among critical response partners.
- Apply the Five-Phases of Emergency Management to a prescribed scenario involving a specific location and hazard category.

EMDS 401: Natural and Technological Disaster Risks

Upon successful completion of the course EMDS 401 - Understanding Natural and Technological Disaster Risks. The student will:

- Analyze historical accounts of significant natural and technological disasters on a global basis, to gain insight as to the aftermath impacts on modern emergency management practices.
- Describe potential impacts of naturally occurring events including meteorological and geological phenomenon on people, critical infrastructure, and the environment.
- Examine and correctly interpret leading indicative data regarding potential risks of events, probability of occurrence, and predictability of timing, scope, etc. to formulate prevention and mitigation strategies.
- Evaluate and correctly document resource needs for a prescribed incident type and scope, using FEMA Incident Management process.
- Actively collaborate in a group environment to develop a comprehensive hazard assessment and response pre-plan for a randomly selected event and location utilizing basic and advanced data collection resources and methods.

EMDS 402: Terrorism, Violence, Resiliency and Response.

Upon successful completion of the course EMDS 402 - Terrorism, Violence, Resiliency and Response. The student will:

- Research historical accounts of acts of terrorism and violence on a global basis, and assess direct impacts on life, infrastructure, and environment, as well as indirect impacts such as costs of mitigation efforts, effects on commerce, and impacts on ordinary citizens.
- Describe the motivational elements that promote a person(s) to plan and execute acts of terror and/or violence.
- Conceptualize the global evolution of modern day terrorism.
- Recognize the broad and ever changing dynamics of terror tactics and the broad spectrum of violence mechanisms available to terrorism actors, and their potential impacts.
- Explore advances in technologies and practices aimed at detecting potential terror actors and/or their mechanisms for perpetrating acts of terror.

EMDS 503 – Disaster Planning, Management, and Preparedness

Upon successful completion of the course EMDS 503- Disaster Planning, Management, and Preparedness. The student will:

- Apply advanced technical tools and resources that are vital for the development of functional strategic plans for all Five Phases of Emergency Management: Prevention, Mitigation, Planning, Preparedness, Response, and Recovery.
- Demonstrate the ability to gather accurate data regarding potential hazards,
- Perform analysis to quantify the associated risks from potential hazards data
- Develop balanced, effective policy, procedures, plans, training methodologies, and communications to accomplish identified strategic goals.

EMDS 504- Trends in Disaster Preparedness and Management

Upon successful completion of the course EMDS 504- Trends in Disaster Preparedness and Management. The student will:

- Demonstrate means and methods to gather germane data and conduct research focused on emerging issues in emergency management.
- Explore significant global events that involved natural and/or technological hazard components, and organize key lessons learned, and proposed methods for integration of findings into effective policy and/or procedures.
- Examine changing dynamics of terror related acts and the effects of preparedness and mitigation practices on the frequency and severity of outcomes.
- Analyze after action reports from significant global disasters, and develop application guides based on key considerations.

3. Rationale:

3.1 Reason for developing the proposed certificate program:

Provide evidence of student demand at the regional, state and national levels.

The interest in this program has been growing. In preparation for this proposal, a series of meetings were held with College Deans, Department Heads, Public School Officials, and representatives at all levels of Emergency Services at the state and regional levels.

Since the events of 09-11-01, the focus on readiness for disasters has been growing. In recent years, because of several significant disasters including natural and people caused, there has been a significant increase in regulatory mandates for organizations to have a comprehensive emergency management program. These requirements drive the need to have staff that understands the required program elements and have the ability to develop and implement the various plans required for compliance.

The students completing this program will have demonstrated the ability to assess the preparedness needs of an organization and facilitate the development of appropriate emergency plans for all facets of emergency management.

Employer Demand;

Employers in both the public and private sectors are increasingly creating positions within their organizations for emergency managers and coordinators. This program will help prepare students to meet the requirements of this expanding area of employment.

3.2 Relationship of the proposed certificate program to other programs now offered by the department:

3.3 Relationship of the proposed certificate program to certificate programs offered in other departments:

3.4 Projected enrollment in the proposed certificate program:

3.5 Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):

3.6 Relationship of the proposed certificate program to the university mission and objectives:

4. Curriculum:

5. Budget implications:

6. Proposed term for implementation:

7. Dates of prior committee approvals:

Office of the Dean	_____
Ogden College Curriculum Committee	_____
Contact with Office of Academic Affairs	_____
Professional Education Council (if applicable)	_____
Undergraduate Curriculum Committee	_____
University Senate	_____
Board of Regents	_____