NEW GRADUATE DEGREE OR GRADUATE CERTIFICATE FORM D

Date: March 22, 2013

Allow up to one year for the process to be completed for a certificate, and 18 months for a degree.

Stephen D. Burd

(Name of individual initiating Graduate Degree or Graduate Certificate)

Associate Professor - 505-277-6418

(Title, position, telephone number)

burd@unm.edu

(Email address)

Anderson School of Management - Department of Marketing, Information, and Decision Sciences

(Department/Division/Program)

- -

Note: Proposals for new graduate degrees or graduate certificates need to follow an approved format. Please call the Office of Graduate Studies and ask for an outline. Revisions of graduate degrees and some new certificates also may need state approval, depending on the extent of changes proposed. Please consult the Office of the Provost for advice prior to initiating this form.

Attach the following required documents:

1. Executive Summary.
2. Program Proposal (in the approved format).
3. Catalog Description (to include program curriculum).
4. Graduate Program Projected Costs (only for new degrees).
5. Library Impact Statement.

Does this new degree affect any existing program? Yes ☒ No ☐ If yes, attach statement.

Proposed date to admit new students: Term Spring   Year 2014

- -

Required Signatures:

Department Chair _____ Date 3/23/13

College Curricula Committee _____ Date 3/25/13

College or School Dean _____ Date 4

Dean of Library Services _____ Date

Office of the Registrar—Catalog _Elizabeth H. Barton_ Date 08/16/13

FS Graduate Committee _____ Date 9/6/2013

Dean of Graduate Studies _____ Date 9/9/13

FS Curricula Committee _____ Date

Office of the Provost _____ Date 10/16/13

Faculty Senate _____ Date 11/7/13

Board of Regents _____ Date 12/10/13

Additional Approvals for Degrees:

Board of Regents _See above_ Date _____

Council of Graduate Deans _____ Date _____

Academic Council of Higher Education _____ Date _____

Higher Education Department _____ Date _____

State Board of Finance _____ Date _____
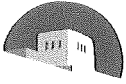
Department of Computer Science

Dr. Stephen Burd
Anderson Schools of Management
MSC05 3090
1 University of New Mexico
Albuquerque, NM 87131-0001

August 29, 2013

Dear Dr. Burd,

Faculty from the UNM Computer Science graduate program committee have reviewed
the proposal for a MS degree in Information Systems and Assurance to be offered by
Anderson School of Management. We enthusiastically offer our support to ASM for this
proposed degree program.

We see many benefits of such a program to students who have obtained an undergraduate
degree in Computer Science. A key benefit being the opportunity for these students to
continue their educational pursuits so that they are better prepared for advanced career
positions in information systems development, system administration, computer and
network security, forensic investigations, risk assessment and mitigation, and IT auditing.
We also support the incorporation of existing CS courses and the opportunity for students
to utilize additional CS courses in this program since course requirements are customized
on a per-student basis.

We look forward to educational collaborations through the Information Systems and
Assurance MS program at Anderson School of Managment. Again, we offer our
strongest support for this proposal.

Respectfully,

Michalis Faloutsos
Professor and Chair
Computer Science Department

College of Business

Office of the Dean
MSC 3AD
New Mexico State University
P.O. Box 30001
Las Cruces, NM 88003-8001
575-646-2821, fax: 575-646-6155
business.nmsu.edu

September 4, 2012

Re: UNM Anderson School of Management Proposal for MS in Information Systems and Assurance

Dear Program Review Committees:

I'm writing to support the UNM Anderson School of Management proposal for a MS degree in Information Systems and Assurance.

New Mexico State University's College of Business does not offer a similar program and we see the value to New Mexico of launching this program. As noted in the UNM proposal, students who earn the MS/ISA degree will be positioned to enter the New Mexico workforce in both the private and public sectors, taking on technical roles in IT security or information systems management.

Yours truly,

Garrey E. Carruthers
Dean

Stephen Burd

Dear Program Review Committee,

The Computer Science and Engineering Department of New Mexico Tech has read a proposal for an MS program in 'Information Systems and Assurance' prepared by the UNM Anderson School of Management.

We do not see any appreciable overlap with our programs in technical content.

I am therefore pleased to offer our support to the UNM Anderson School of Management for its proposed MS degree in Information Systems and Assurance.

The students entering the NM workforce with this degree should be able to fill important Information Technology roles in both the private and public sectors.

Yours sincerely,

Subhasish Mazumdar

Subhasish Mazumdar, Ph.D.
Associate Professor & Chair,
Dept of Computer Science and Engineering,
Adjunct Faculty, Dept of Management.
New Mexico Tech
801 Leroy Place, Socorro, NM 87801
Work: (575) 835-5288
Fax: (575) 835-5587
www.cs.nmt.edu/~mazumdar

New Mexico

HIGHLANDS
University

Box 9000
Las Vegas, New Mexico 87701

Tel: 505-425-7511   www.nmhu.edu

10/8/2012

Subject: Re: MS in Information Systems and Assurance program proposal

Dear Program Review Committee,

Faculty from the graduate Software-driven Systems Design and the graduate Media Arts and Computer Science programs in the Department of Media and Technology, School of Business, Media, and Technology at New Mexico Highlands University have read a proposal for an MS program in 'Information Systems and Assurance' prepared by the UNM Anderson School of Management.

We do not see any appreciable overlap with our programs in technical content.

We are therefore pleased to offer our support to the UNM Anderson School of Management for its proposed MS degree in Information Systems and Assurance.

The students entering the NM workforce with this degree should be able to fill important Information Technology roles in both the private and public sectors.

Sincerely,

Prof. David M. West
Software-driven Systems Design, Media and Technology Dept.
New Mexico Highlands University

Sandia National Laboratories

Operated for the U.S. Department of Energy by
Sandia Corporation

P.O. Box 969
Livermore, CA 94551-0969

Phone: (925) 294-4531
Fax: (925) 294-6600
Internet: rlhutch@sandia.gov

Dr. Stephen Burd
Anderson Schools of Management
MSC05 3090
University of New Mexico
Albuquerque, NM 87131-0001

September 26, 2012

Dear Dr. Burd;

I'd like to take this opportunity to express my enthusiastic support to establish a Master's degree program in Management of Information Systems and Assurance. Your Program targets a unique area of growing need to National security: information assurance to protect our financial and business interests. Over the last several years, the Nation has witnessed the emergence and rapid growth of sophisticated criminal organizations that have transformed computer compromise into a lucrative business. Technology alone cannot address these threats; our greatest opportunities to manage national cyber security risks require policy analysis, security metrics, identity management, and business processes. Without these skills, it's entirely possible to spend billions of dollars on technology and end up with a less secure system. Your proposed Program that couples fraud accounting and financial investigations with digital forensics and computer security will likely have a greater impact on these criminal organizations than will pure technical programs.

Our organization has recently recognized the importance of Master of Science programs that include all aspects of Information Management and security and has restructured our employment designations in order to enable a more aggressive hiring program for these critical skills. We will look to University of New Mexico to help meet these needs. In addition to helping satisfy our staffing needs, I look forward to continuing our strong partnership through our internship Programs. Your Program is unique and necessary to prepare a workforce capable of addressing evolving threats to National security.

Sincerely,

Bob Hutchinson
Senior Manager
Information Security Sciences
Sandia National Laboratories

Dr. Stephen Burd
Anderson Schools of Management
MSC05 3090
University of New Mexico
Albuquerque, NM 87131-0001

October 16, 2012

Dear Dr. Burd;

I'd like to take this opportunity to express my enthusiastic support to establish an MS degree program in Information Systems and Assurance. Having been a recent graduate of the Information Assurance MBA program, I can attest to the value and necessity of the program in an increasingly competitive and dynamic field.

Given the numerous facets in the IT/IA/IS world today, the proposal of different groupings will better equip program graduates in the field according to their strengths and interests. Additionally, making the program a Master of Science will position students more competitively in the challenging job market. Although the breadth of information I gained through my program has been an invaluable starting point for my career, the proposed program and study plans are more congruous with what I've encountered in the last few years. One of the many benefits of this program is combining the institutional and managerial level perspective with a broad technical understanding of the field. However, by having a MS program dedicated to ISA, students will have the opportunity to further broaden and refine their skills by focusing on courses more relevant to their specialization.

As organizations around the world grow more connected and the reliance on technology increases, so will the demand for qualified professionals. However, the most effective and best situated to solve the issues we face today (and will face in the future), are those that have a unique but tightly integrated combination of management and technical skills. This program targets a critical need in national, regional, and local security and for businesses and government of all sizes. As the sophistication of emerging threats grows, so do those who are protecting the assets whether it is for the financial, government, or healthcare sector. This program will help prepare graduates to make the fine distinctions between weighing business and mission impacts with costs- something that a purely technical degree typically does not offer. As budgets continue to tighten, the demand for qualified employees to make those tough decisions will be valuable.

In addition to helping satisfy our staffing needs, I look forward to continuing our strong partnership through our internship programs and educational outreach. The MS-ISA program is unique and necessary to prepare a workforce capable of addressing evolving threats to national security. Please do not hesitate to contact me with any questions.

Sincerely,

Jenna M. Esparza
Office of the Chief Information Officer
Information Security Group
Los Alamos National Laboratory
jesparza@lanl.gov

In Reply, Please Refer to
File No.

4200 Luecking Park Avenue NE
Albuquerque, New Mexico 87107

September 27, 2012

Mr. Stephen Burd
Anderson Schools Management
MSCo5 3090
University of New Mexico
Albuquerque, NM 87131

Dear Mr. Stephen Burd:

I am writing to offer my support for the formation of the MS graduate program, Information Systems and Assurance. Our organization is particularly interested in this masters program as it provides a forum for students from engineering and computer science backgrounds to work in partnership with one another, further advancing the technical depth of the work force that the Federal Bureau of Investigation (FBI) pulls from. The collaboration of our New Mexico Regional Computer Forensics Laboratory's Computer Forensic Examiners and the Anderson Schools of Management Interns has provided positive exchanges of real-world applications and theory. With MS-ISA graduate students, we can continue to build on that relationship, with goal being to provide employment opportunities.

The FBI and its partners are leading the national effort to investigate high-tech crimes, including cyber-based terrorism, computer intrusions, online sexual exploitation, and major crime-frauds. To stay in front of emerging trends, it is absolutely essential that we have employees with advanced technical capabilities and knowledge. The proposed MS graduate program will assist in modernizing content to address the world's progression into the cyber-world.

Currently there are key areas applicants can qualify under for an Agent or Support position within the FBI, with the MS-ISA degree satisfying the Computer Science/Information Technology qualifications. Because of the breadth and scope of the FBI's

mission and our ongoing development of cyber programs, the MS-ISA degree will remain a relevant and versatile area of expertise.

   I strongly support UNM's already nationally recognized efforts to expand their recruitment and training of men and women into the field of MS in Information Systems and Assurance.

                              Sincerely,

                              Carol K. Lee
                              Special Agent in Charge

Los Alamos
NATIONAL LABORATORY
—— EST.1943 ——

Office of the Chief Information Officer
Information Security
Attention: Steven G. Howard
Mail Stop B289
Los Alamos, New Mexico 87545   *Date:* October 30, 2012
505-667-2051

Stephen Burd
Anderson Schools of Management
MSC05 3090
University of New Mexico
Albuquerque, NM 87131-0001

Dear Dr. Burd:

I would like to thank UNM for providing the opportunity to participate in the development of the MS in Information Systems and Assurance program. Having worked in both the technical implementation and operations and oversight roles, I have seen a need for individuals that have both reasonably strong technical skills as well as strong management, leadership and communication skills.

As Los Alamos National Laboratory moves from a compliance based security model to one based on risk, the skill balance provided by your program will be beneficial. A risk based approach requires individuals that can analyze risk, understand the impact of security on mission, be able to balance the two and finally, communicate recommendations to management. Successful graduates of your program will very likely become the managers themselves, in which case a solid understanding of both the technical issues as well as business operations would be very valuable.

During my review of your program it is clear to me you have taken suggestions provided during your focus groups to heart and developed a program that will produce individuals suited for work in areas such as the LANL Office of the CIO. I support your establishment of an MS in Information Systems and Assurance program.

Sincerely,

Steven G. Howard
Team Lead, OCIO Risk Management Team

SGH:sgh

Dr. Stephen Burd
Anderson Schools of Management
MSC05 3090
University of New Mexico
Albuquerque, NM 87131-0001

October 5, 2012

Dear Dr. Burd;

I would like to show my support for the creation a master's degree program in management of information systems and assurance. The Anderson Schools of Management (ASM) program addresses a unique area of growing needs to national and global security that is not currently met by demand for these trained individuals. For the past several years I have personally seen companies, our nation and many others being targeted by state sponsored intruders, organized crime and activists transforming computer intrusions into a actualized problem. Even though technology has emerged to attempt to tackle these problems, highly skilled analysts are still needed to engineer, maintain and analyze the data from these systems. I know your proposed program that combines fraud and financial investigations, digital forensics and computer security will likely have a greater impact on these types of attacks than any pure technical programs; producing true leaders in this space that will have the knowledge of business impact and technical expertise. We have and will continue to hire students and support interns from ASM information security programs.

Sincerely,

Kelcey Tietjen
Global Information Security Operations Manager
Bechtel Corporation

To: Dr. Stephen Burd
From: Elisha Allen
Date: September 24, 2012
Subject: MS-ISA

Thank you for the opportunity to sit on the focus group for Anderson's proposed MS program in Information Systems and Assurance (MS-ISA), and for the recent materials you sent relating to this proposal. In my professional opinion as an IT Manager at UNM, this program would be helpful in preparing students for the IT Workforce. In my own selection of applicants to fill technology positions, I look for candidates with the right balance of technical competence, functional problem solving, and communication skills. This combination is not always easy to find, as formal computer science curriculum does not always include the requisite managerial competence and communication skills for effective operation in an organization that needs employees with technical and functional competencies.

Similarly, traditional management degrees can lack sufficient depth in technical issues related to technology implementation, planning and management. The proposed curriculum offers critical skills in both the technical and functional areas, and would be an attractive credential when I am reviewing job applicants. Please feel free to contact me if you have any questions, and I look forward to reviewing applicants with degrees in this program in years to come.

Sincerely,

Elisha Allen
Associate Director, New Media & Extended Learning