



ENMU-Ruidoso

CYBERSECURITY CERTIFICATION PROGRAMS



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Workforce Training Need

- 30% more computer and network workers needed from 2008 to 2018 ¹;
- 433 New Mexico IT job postings in 2012 for security-specific positions ²;
- 110,000 information assurance professionals in assigned positions to have security certification within the next five years ³;
- 400,000 full and part-time military service members, and contractors who are performing information assurance functions must be certified in security ³;



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Workforce Training Need (cont)

- **Executive Order -- Improving Critical Infrastructure Cybersecurity**

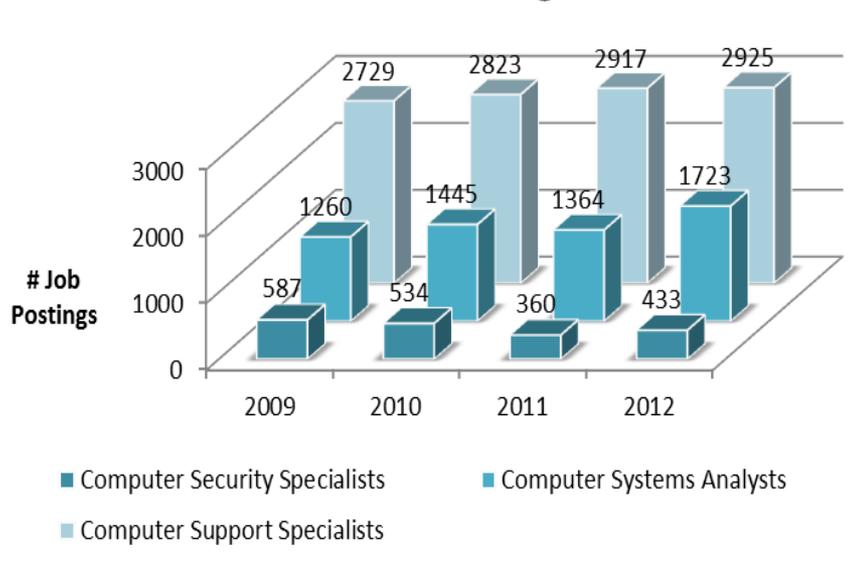
“The national and economic security of the United States depends on the reliable functioning of the Nation's critical infrastructure in the face of such threats. It is the policy of the United States to enhance the security and resilience of the Nation's critical infrastructure and to maintain a cyber environment that encourages efficiency, innovation, and economic prosperity while promoting safety, security, business confidentiality, privacy, and civil liberties.”⁴



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New Mexico IT Job Postings 2009-2012



The need for quality cybersecurity training is expected to dramatically increase within the year

Headlines from the past 24hr (6/4/13):
*“Obama to press **China's** Xi to act against **cyber spying**”*
*“New **Chinese** hacker group targets governments and nuclear facilities”*
“NATO takes up cyber-defense as threat grows”

“VA Systems Hacked From Abroad-At Least 8 Nation-States Said to Be Behind Attacks”
“US, China to talk cyber security on West Coast”
“NATO boosts cyber defenses but members differ on its role”



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Cybersecurity Certificate Development

- Initially designed by Stephen Miller in accordance with American Computing Machines (ACM) and CompTIA Security+ recommendations;
- Approved by the ENMU Regents and submitted to the New Mexico Higher Education Department 12/9/2010;
- While attending the Washington, D.C. NSI Impact Conference in April, 2011, military and Homeland Security personnel recommended INFOSEC certification for the Ruidoso program;



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Cybersecurity Certificate Development (cont)

- Curriculum was re-written to INFOSEC standards and the application was submitted December, 2011;
- Awarded NSF INFOSEC 4011 & 4016 January, 2012.
Ruidoso is the only INFOSEC certified Community College in NM and one of 14 in the nation;
- Signed articulation agreement with NM Tech in February, 2013, accepting Ruidoso IS courses as meeting BS degree requirements;
- 14 graduates as of May, 2013 including one dual credit student;



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Cybersecurity Program Characteristics

- All 19 credit hours of college coursework and the self-paced community education versions are available entirely online;
- Self-paced certification program is tailored for active military, returning veterans, and current IT professionals;
- Programs qualify for federal, VA, VA Spousal, and WIA funding;



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Cybersecurity Program Characteristics (cont)

- Courses are taught by full- and part time, highly qualified professors;
- The certificate has been adopted by Santa Fe Community College and ENMU-Roswell and will appear in their course catalogs. It is coming soon to CNM, UNM-Taos, UNM- Los Alamos, and UNM-Valencia. Adoption is made possible by SUN Online.



"Cyber Ninja's"



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Delivery Methodology



Beginning this year, the ENMU-Ruidoso Cybersecurity courses will be shared with community colleges throughout New Mexico via SUN Online...



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Delivery Methodology (cont)



SUN Online is a post-secondary online course sharing system that has been initiated by a consortium of New Mexico public community colleges and universities;

- Promotes cooperation rather than competition;
- Reduces program duplication;
- Increases access to unique programs such as the Cybersecurity Certificate;
- Promotes increased quality of online instruction in New Mexico;
- Can be used to share online courses, certifications, and degrees from any discipline;



References:

¹ The US Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections

² NM Workforce, CNM researcher Brittnay Esswein, EMSI database systems and WFS

³ Department of Defense, Directive 8570

⁴ <http://www.whitehouse.gov/the-press-office/2013/02/12/executive-order-improving-critical-infrastructure-cybersecurity>