M O N T A N A   B O A R D   O F   R E G E N T S

LEVEL II REQUEST FORM

Item No.:	136-2855-R0907	Date of Meeting:	September 19-21, 2007
Institution:	Montana State University-Great Falls College of Technology		
Program Title:	Computer Server Administration Certificate of Applied Science		

Level II proposals require approval by the Board of Regents.

Level II action requested (check all that apply):   Level II proposals entail substantive additions to, alterations in, or termination of programs, structures, or administrative or academic entities typically characterized by the (a) addition, reassignment, or elimination of personnel, facilities, or courses of instruction; (b) rearrangement of budgets, cost centers, funding sources; and (c) changes which by implication could impact other campuses within the Montana University System and community colleges. Board policy 303.1 indicates the curricular proposals in this category:

<table>
<tr><td>☐</td><td>1.</td><td>Change names of degrees (e.g. from B.A. to B.F.A.)</td></tr>
<tr><td>☐</td><td>2.</td><td>Implement a new minor or certificate where there is no major or no option in a major;</td></tr>
<tr><td>☒</td><td>3.</td><td>Establish new degrees and add majors to existing degrees;</td></tr>
<tr><td>☐</td><td>4.</td><td>Expand/extend approved mission; and</td></tr>
<tr><td>☐</td><td>5.</td><td>Any other changes in governance and organization as described in Board of Regents' Policy 218, such as formation, elimination or consolidation of a college, division, school, department, institute, bureau, center, station, laboratory, or similar unit.</td></tr>
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Specify Request:

Montana State University-Great Falls College of Technology seeks approval from the Montana Board of Regents to offer a Certificate of Applied Science in Computer Server Administration.

COMPUTER SERVER ADMINISTRATION
MSU-GREAT FALLS COLLEGE OF TECHNOLOGY

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Curriculum Proposal

1. **Overview**

The proposed program would award a **Certificate of Applied Science in Computer Server Administration** to students who successfully complete the program requirements. The proposed program prepares individuals for employment in the computer networking field, specifically focusing on server management, maintenance, and administration. Students in this program gain hands-on experience with computer hardware, software and networks. Upon successful completion of the program, the student will have the needed skills to sit for CompTIA Network+, Linux+ and Microsoft MCSA/MCSE certifications.

2. **Need**
   a. *To what specific need is the institution responding in developing the proposed program?*

Through in-take, advisement and evaluation the College has determined many students wish to simply take coursework which will lead them toward specific industry standard certifications or a unique occupational opportunity rather than the completion of an entire Associate of Applied Science degree. The proposed program allows students to work toward specific industry standard certifications within the computer server field as well as a Certificate of Applied Science credential from the College. In addition, all of the courses within the proposed program matriculate into the College's AAS in Network Support and thus provides a natural ladder for student progression through levels of higher education, as well as a stop out point for students to achieve educational and industry credentials that will aid them in job placement.

   b. *How will students and any other affected constituencies be served by the proposed program?*

Alluded to briefly in 2.a many students come to the College seeking an industry level certification training, or come pursuing an AAS degree only to stop-out when the skill-sets they develop make them employable without a credential. Yet the College is committed to ensuring students achieve the goal of obtaining a credential before they leave the institution. The proposed program provides a solution to both, by giving students the opportunity to pursue industry certification and at the same time earn a Certificate of Applied Science from the College. In the event they do stop-out and become employed, it also provides a recognized completion point and entrance point should they decide to come back and pursue the remaining courses required for the AAS.

   c. *What is the anticipated demand for the program? How was this determined?*

Demand is estimated from two primary factors. First is the enrollment in the current AAS program, which is estimated at 17 students for fall 2008. The second factor is the participation rate of non-degree seeking students who have enrolled in some or all of the classes offered within the proposed program in the recent past. Overall it appears that the program could have as few as eight students and as many as 20 since the program is built within the College's AAS in Network Support. This point also illustrates the viability of the program, as its addition will have little or no new fiscal impact on the College since it is currently offering all of the coursework required of the program.

3. **Institutional and System Fit**
    a. *What is the connection between the proposed program and existing programs at the institution?*

Preparing students for entry-level positions in technology-rich, high-demand fields in the College's service region is central to the mission of College. The College currently provides a variety of Computer Information Technology programs, awarding either an Associate of Applied Science (AAS) degree or Certificate of Applied Science (CAS) credential, in fields such as Microcomputer Support, Web Development, Network Support, Network Architecture and Computer Assistant. Computer Server Administration, with its emphasis on applied skills development and high-demand employment in the server and network environments, is an appropriate extension of the institution's mission and program portfolio. Mentioned above, the proposed program is integrated within the AAS in Network Support and the requested credential will provide a designation for students' success in completing a portion of the program specific to server administration.

    b. *Will approval of the proposed program require changes to any existing programs at the institution? If so, please describe.*

No. The College currently offers all of the coursework of the proposed program within an existing program, the AAS in Network Support.

    c. *Describe what differentiates this program from other, closely related programs at the institution (if appropriate).*

The propose program focuses on a specific set of courses intended to build a skill-set in computer server systems administration, and is geared toward preparation for employment and certification in a subset of the computer information technology industry. The coursework in the proposed program is one component of the AAS in Network Support, however to earn that credential additional coursework in network technology is required. The other computer information technology programs at the College share some common introductory courses but differ significantly in the technical requirements of the programs.

    d. *How does the proposed program serve to advance the strategic goals of the institution?*

In alignment with the strategic plan of the Montana Board of Regents, the College is committed to increasing participation of students in post-secondary education, specifically two-year programming, as well as increasing the number of students earning a credential. In addition, at the core of the College's Mission is preparing people for and placing them into technically-rich, high-demand jobs. With the focus on developing a credential and preparing for industry certifications, both easily recognizable by employers, the proposed program will move the College a step further in achieving the goals set for in the institution's strategic plan as well as improving institutional effectiveness.

    e. *Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the substantially duplicated programs, please include the agreement(s) as part of the documentation.*

Similar programs and coursework exists a numerous MUS institutions, most specifically at UM-Helena COT, UM-Missoula COT, and Montana Tech COT. No efforts were made to collaborate for two primary reasons. First, as previously mentioned, all of the coursework for the proposed program is currently being taught by the College and will continue to be taught within the AAS in Network Support program. Second, because of the high level on hands-on coursework within the program

distance delivery has been problematic, although the College has made inroads at moving the curriculum into a hybrid (mixed-mode) delivery format.

4. **Program Details**
   a. *Provide a detailed description of the proposed curriculum. Where possible, present the information in the form intended to appear in the catalog or other publications. NOTE: In the case of two-year degree programs and certificates of applied science, the curriculum should include enough detail to determine if the characteristics set out in Regents' Policy 301.12 have been met.*

Computer Server Administration – Certificate of Applied Science

Required General Education Courses

Course #	Course Title	Credits
ENGL 121**+	Composition I	3
COM 135**+	Interpersonal Communication	3
MATH 108**+	Algebra for College Students **OR**	
MATH 130**+	Precalculus Algebra **OR**	
MATH 150 **+	Math for Liberal Arts **OR**	
MATH 181**+	Calculus	3/4
	Subtotal	**9-10**

Required Technical Courses

Course #	Course Title	Credits
CIT 111+	Introduction to Computers	3
CIT 166*+	Computer Operating Systems	4
CIT 210*+	Network Operating System 1	2
CIT 211*+	Network Operating System 2	2
CIT 212*+	Network Operating System 3	2
CIT 213*+	Network Operating System 4	2
CIT 214*+	Network Operating System 5	2
CIT 215*+	Network Operating System 6	2
CIT 126*+	Networking Fundamentals	3
CIT 176*+	Routers and Routing Basics	3
CIT 208*+	Fundamentals of UNIX/Linux	4
	Subtotal	**29**

Total Credits 38-39

Note: Some of the courses are offered in a ½ semester format: CIT 210/CIT211 are offered Fall Semester year one; and CIT 212/CIT213 are offered Spring Semester year one. It is important that students enroll in both sets of courses at the same time.

Course Outcomes:
Upon the completion of the Networking Infrastructure Certificate students should be prepared to:

- Demonstrate an advanced level understanding of Microsoft 2003 server configuration.
- Demonstrate a basic understanding network infrastructure design and configuration.
- Demonstrate a basic understand of the Linux server operating system.
- Pass the MCSA / MCSE industry standard certification exam battery with at least an 70%.
- Obtain and keep a computer server professional position within the workforce.

   b. *Describe the planned implementation of the proposed program, including estimates of numbers of students at each stage.*

The coursework within the proposed program is currently offered by the College. It is anticipated that many students currently seeking the AAS in Network Support or taking individual courses specific to an industry certification will seek the Certificate of Applied Science presented here. Initially, in Academic Year 2008 the College expects the program to attract a minimum of eight students and hopes to see that number grow to 15 to 20 students over the course of the program.

5. **Resources**
   a. *Will additional faculty resources be required to implement this program? If yes, please describe the need and indicate the plan for meeting this need.*

No new faculty will be required to implement this program.

   b. *Are other, additional resources required to ensure the success of the proposed program? If yes, please describe the need and indicate the plan for meeting this need.*

No additional resources are required. Mentioned previously, this program is grouping course current within the existing Network Support into a Certificate of Applied Science that will function as a stop out point or stepping point towards the AAS.

6. **Assessment.**

The proposed program will be assessed using the College's institutional outcomes assessment practices. These include assessing standard performance metrics such as graduation/completion rates, student retention, enrollments, and will undergo program review as required by Board of Regent Policy and standard College practice. In addition the program's student learning outcomes will be assessed to evaluate student success in obtaining the skills identified as goals of the program. Finally, additional measures will be used to gauge program success including assessing the number of students who successfully earn industry certifications, how many students who step out with this credential, come back in to pursue the AAS degree, and qualitative measures such as student and employer satisfaction.

7. **Process Leading to Submission**

The proposed program originated from faculty, student and industry (advisory board) conversations that centered on answering the questions addressed in the rationale portion of this proposal. Collectively they developed the proposed program's curriculum and faculty advanced this curriculum through the College's Curriculum Committee and administration.