



A REPORT
TO THE
MONTANA
LEGISLATURE

LEGISLATIVE AUDIT
DIVISION

18P-01

PERFORMANCE AUDIT

Montana University System Coordination of Student Enrollment and Administrative Services

*Office of the Commissioner of
Higher Education*

JUNE 2019

**LEGISLATIVE AUDIT
COMMITTEE**

REPRESENTATIVES

KIM ABBOTT

Kim.Abbott@mtleg.gov

DAN BARTEL

Danbartel2@gmail.com

TOM BURNETT, VICE CHAIR

Burnett.tom@gmail.com

DENISE HAYMAN

Denise.Hayman@mtleg.gov

EMMA KERR-CARPENTER

KC@mtleg.gov

MATT REGIER

Matt.Regier@mtleg.gov

SENATORS

DEE BROWN

senatordee@yahoo.com

JASON ELLSWORTH

Jason.Ellsworth@mtleg.gov

JOHN ESP

Johnesp2001@yahoo.com

PAT FLOWERS

Pat.Flowers@mtleg.gov

TOM JACOBSON

Tom.Jacobson@mtleg.gov

MARY McNALLY, CHAIR

McNally4MTLeg@gmail.com

MEMBERS SERVE UNTIL A
MEMBER'S LEGISLATIVE TERM
OF OFFICE ENDS OR UNTIL A
SUCCESSOR IS APPOINTED,
WHICHEVER OCCURS FIRST.
§5-13-202(2), MCA

FRAUD HOTLINE
(STATEWIDE)

1-800-222-4446

(IN HELENA)

444-4446

LADHotline@mt.gov

PERFORMANCE AUDITS

Performance audits conducted by the Legislative Audit Division are designed to assess state government operations. From the audit work, a determination is made as to whether agencies and programs are accomplishing their purposes, and whether they can do so with greater efficiency and economy.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Members of the performance audit staff hold degrees in disciplines appropriate to the audit process.

Performance audits are conducted at the request of the Legislative Audit Committee, which is a bicameral and bipartisan standing committee of the Montana Legislature. The committee consists of six members of the Senate and six members of the House of Representatives.

AUDIT STAFF

CHELSEA RAYFIELD
ALYSSA SORENSON

WILLIAM SOLLER

Reports can be found in electronic format at:
<https://leg.mt.gov/lad/audit-reports>

LEGISLATIVE AUDIT DIVISION

Angus Maciver, Legislative Auditor
Deborah F. Butler, Legal Counsel



Deputy Legislative Auditors:
Cindy Jorgenson
Joe Murray

June 2019

The Legislative Audit Committee
of the Montana State Legislature:

This is our performance audit of coordination of enrollment and administrative services in the Montana University System (MUS) managed by the Office of the Commissioner of Education (OCHE) under the authority of the Board of Regents.

This report provides the legislature information about the OCHE coordination of student enrollment and shared administrative services between MUS campuses. This report includes recommendations for improving the consistency of transfer processes, maintenance of the common course numbering system, and further development of the shared services initiative and information technology governance in the MUS. A written response from OCHE is included at the end of the report.

We wish to express our appreciation to OCHE and to the many MUS campus staff and students for their cooperation and assistance during the audit.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Angus Maciver".

Angus Maciver
Legislative Auditor

TABLE OF CONTENTS

Figures and Tables.....	iii
Elected, Appointed, and Administrative Officials.....	iv
Report Summary	S-1
CHAPTER I – INTRODUCTION AND BACKGROUND	1
Introduction.....	1
Montana University System Organization	1
Audit Scope.....	3
Seamless Student Enrollment.....	4
Shared Administrative Services	4
Audit Objectives.....	5
Audit Methodologies.....	5
Report Contents.....	6
CHAPTER II – COORDINATION OF SEAMLESS STUDENT ENROLLMENT BETWEEN CAMPUSES	9
Introduction.....	9
Board of Regents Has Developed Student Transfer Policies.....	9
MUS Transfer Students Are Generally Satisfied With Transfer Experience	10
Campuses Not Required to Submit Similar Student Information When Transferring.....	12
Review of MUS Core Curriculum Prior to Transfer Is Not Common	12
Many Transfer Students Are Unaware of Transmittal Option.....	13
Additional Guidance and Structure Needed for Transmittal Ease and Consistency.....	15
Common Course Numbering as a Means of Standardizing Transfer	16
Common Course Numbering in Montana Is Defined in Board of Regent Policy.....	17
CCN Implementation Improved Student Credit Transfer, but Maintenance Has Not Been Consistent	17
Other States' CCN Systems Are Similar to Montana's	18
Students Experience Frustration in Transferring Credits	19
Student Data Analysis Work Assessed CCN Performance	20
Unnecessary Course Retakes Happen, But Are Not Common.....	20
Student Retake of Similar Courses With Separate Common Course Numbers	22
CCN Does Appear to Identify Sufficiently Equivalent Courses	23
Over Time, CCN Has Not Been Consistently Maintained.....	25
CHAPTER III – COORDINATION OF SHARED ADMINISTRATIVE SERVICES.....	27
Introduction.....	27
Shared Services Initiatives	27
Shared Services in the Montana University System.....	28
Current Campus Reporting Structure Will Limit Inter-Affiliation Service Sharing.....	29
Shared Services Are Inconsistent Across the University System	29
Human Resources.....	30
Business Services	32
Information Technology Services.....	34
Campus Level Shared Services Initiatives Are Independent From OCHE Efforts.....	36
Systemwide Shared Services Efforts Indicate Incomplete Planning and Stakeholder Engagement	36
Successful Shared Services Include Project Management Principles and Best Practices ..	37

Current Shared Services Effort Is Underdeveloped	37
IT Governance Is Essential for Organizations to Reach IT & Shared Services Goals	39
Board of Regents Has Developed System IT Goals	39
University System IT Governance and Products Are Siloed Between Affiliations	40
Disparate IT Governance Leads to Difficulty in Aligning Processes and Enrolling Students Across the System	42
IT Governance Is Decentralized and Inconsistent	43

OFFICE RESPONSE

Office of the Commissioner of Higher Education	A-1
--	-----

FIGURES AND TABLES

Figures

Figure 1	Montana University System Structure	2
Figure 2	Transfer Survey Student Response to: “Overall, I am satisfied with my experience transferring between campuses in the Montana University System.”	11
Figure 3	Transfer Survey Student Response to: “The transfer process from one Montana campus to another was simple.”	11
Figure 4	Total Known Transfer Options by Percent of Respondents	14
Figure 5	Transfer Survey Student Response to: “I was required or encouraged by my new campus to retake classes I had taken at my previous campus.”	19
Figure 6	Campus Source and Location of Retaken Courses	21
Figure 7	Transfer Survey Student Response to: “The courses I took prior to transfer did not sufficiently prepare me for courses I took after transfer.”	25
Figure 8	Montana University System Shared HR Services.....	31
Figure 9	Montana University System Shared Business Services	33
Figure 10	Montana University System Shared IT Services and Software.....	35

Tables

Table 1	Comparison of Second Course Sequence Outcomes for Students by Grade, Same or Different Campuses.....	24
Table 2	Software Licensing Sharing Between the Affiliations.....	41

ELECTED, APPOINTED, AND ADMINISTRATIVE OFFICIALS

		<u>Term Expires</u>
Board of Regents of Higher Education	Fran Albrecht, Chair	February 2019
	Joyce Dombrowski (effective April 2019)	February 1, 2026
	Dalton Johnson, Student Regent	June 30, 2019
	Casey Lozar (Chair, effective May 2019)	February 1, 2025
	Robert A. Nystuen, Vice Chair	February 1, 2022
	Brianne Rogers	February 1, 2024
	Martha Sheehy	February 1, 2021
	Paul Tuss	February 1, 2020
	Clayton Christian, Commissioner of Higher Education*	
	Steve Bullock, Governor*	
	Elsie Arntzen, Superintendent of Public Instruction*	
	*Ex officio members	
Office of the Commissioner of Higher Education	Clayton Christian, Commissioner of Higher Education	
	Vivian Hammill, Montana University System Chief Legal Counsel, Deputy Commissioner	
	Kevin McRae, Deputy Commissioner for Human Resources	
	Dr. Brock Tessman, Deputy Commissioner for Academic, Research, & Student Affairs	
	Tyler Trevor, Deputy Commissioner for Budget & Planning	
Montana University System Campuses	Dr. Waded Cruzado, President, Montana State University	
	Seth Bodnar, President, University of Montana	
	Daniel Adams, Director of Audit Services, Montana State University	
	Kathy Burgmeier, Director of Internal Audit, University of Montana	



MONTANA LEGISLATIVE AUDIT DIVISION

PERFORMANCE AUDIT

Montana University System Coordination of Student Enrollment and Administrative Services

Office of the Commissioner of Higher Education

JUNE 2019

18P-01

REPORT SUMMARY

The Office of the Commissioner of Higher Education has initiated several efforts to increase the coordination of campuses within the Montana University System (MUS) to improve student transferability and the sharing of administrative services to increase efficiency and effectiveness. While students are satisfied overall with their ability to move between MUS campuses, audit work found room for improvement in transfer processes and maintenance of the common course numbering system. Further development of the current shared services initiative is also needed to meet system goals of efficiency and effectiveness by sharing administrative services between campuses.

Context

The Office of the Commissioner of Higher Education (OCHE) is the central administrative unit of the Board of Regents (BOR) of the Montana University System (MUS). The MUS serves more than 38,000 students and employs more than 8,000 staff. In 1994, BOR restructured the independent campuses of the MUS in tandem with the legislature. The new structure designated campuses to one of two university affiliations, the University of Montana or Montana State University, with each affiliation headed by a single president. Neither statute nor BOR policy provide written expectations regarding the responsibilities and relationships of these new affiliations. As a result, coordination and centralization of services vary between campuses and between flagship affiliations.

As part of audit assessment and planning work, we determined there were risks associated with the coordination of administrative and student services between the various MUS campuses. Consequently, we focused our work on overall examination of the coordination within the

university system at the campus, unit, and system levels. We also examined both seamless student enrollment and shared administrative services. As part of our work, we visited 12 of the 13 campuses.

Results

We determined that while current MUS efforts in seamless student enrollment between the campuses create a satisfactory system for student movement between campuses, improvements to the process could be made. We also found that shared services initiatives and information technology (IT) governance at the system level are more recently implemented and could use further development to increase effectiveness and long-term success. Four recommendations were made related to the OCHE guidance of campus coordination, including:

- ♦ Clarifying and enforcing a single standardized process for MUS transfer students.

(continued on back)

- ♦ Establishing a process to maintain and enforce common course numbering by conducting compliance reviews, reassembling faculty learning outcome councils, conducting analysis to identify potential problems, and developing training.
- ♦ Further developing shared services goals and initiatives to include strategic prioritization, additional campus staff input, and clear implementation guidance.
- ♦ Developing and establishing a university system information technology governance framework, in conjunction with system campus staff.

Recommendation Concurrence	
Concur	4
Partially Concur	0
Do Not Concur	0
Source: Agency audit response included in final report.	

For a complete copy of the report (18P-01) or for further information, contact the Legislative Audit Division at 406-444-3122; e-mail to **lad@mt.gov**; or check the web site at **<https://leg.mt.gov/lad/audit-reports>**
 Report Fraud, Waste, and Abuse to the Legislative Auditor's FRAUD HOTLINE
 Call toll-free 1-800-222-4446, or e-mail **LADHotline@mt.gov**.

Chapter I – Introduction and Background

Introduction

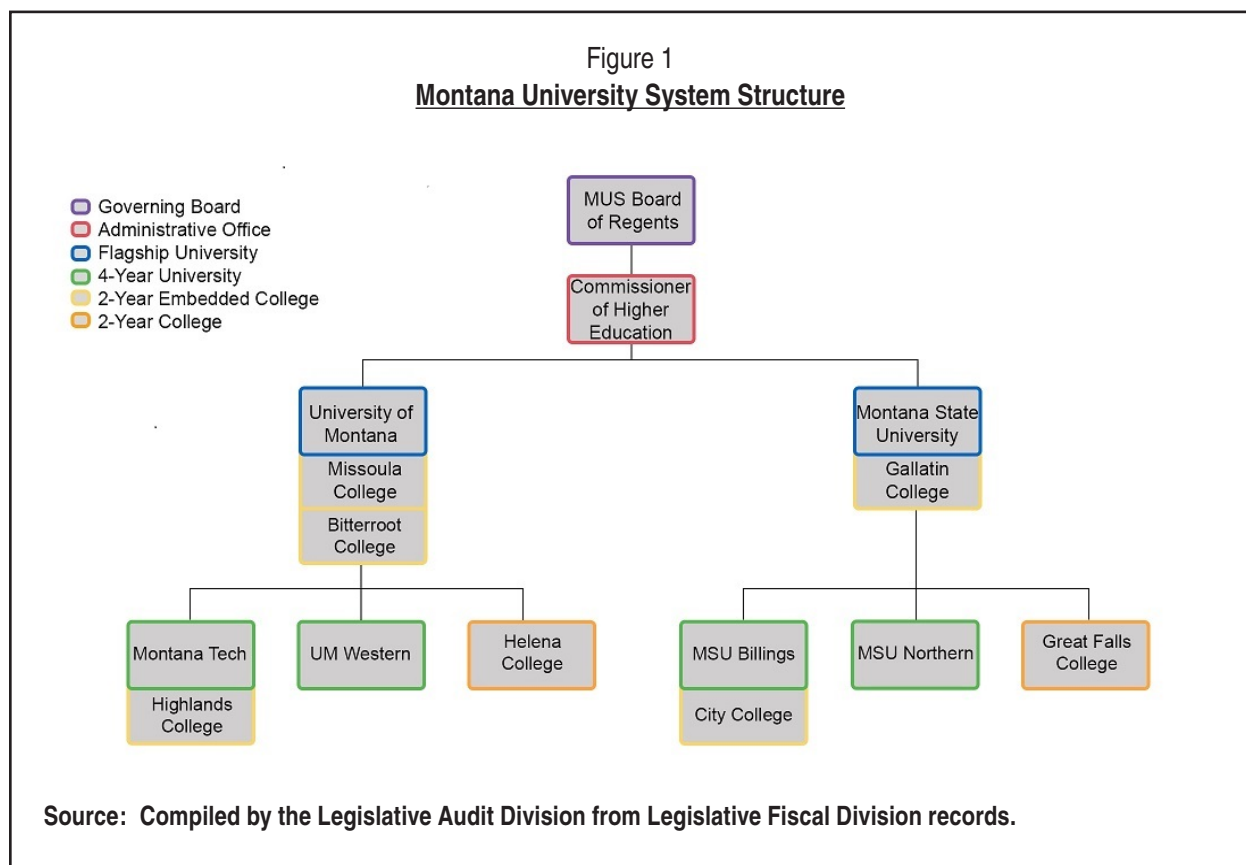
The Office of the Commissioner of Higher Education (OCHE) is the central administrative unit of the Board of Regents (BOR), which is the constitutionally created governing board charged with directing the Montana University System (MUS). The MUS consists of 13 different schools, including two flagship universities with 11 affiliate campuses between them. Other higher education institutions, such as the tribal colleges, are not under the authority of the BOR. The MUS currently serves more than 38,000 students and employs more than 8,000 staff. As the primary vehicle for distributing state support for the university system, OCHE was appropriated approximately \$315 million in fiscal year 2018. Funding comes from a variety of sources including the general fund, federal and state special revenue funds, and proprietary funds. Based on legislative interest in OCHE as the university system's central administrative entity and its role in governing and promoting coordination between campuses, the Legislative Audit Committee prioritized a performance audit of OCHE's organizational structure and place within the MUS. This chapter further discusses the scope of our work, provides background information on OCHE, and discusses the current structure of the MUS.

Montana University System Organization

The MUS has gone through several structural and governance changes since the 1889 Montana Constitution vested general supervision of the university system and all other public education to a Board of Education. In 1972, Constitutional governance changed with the creation of the BOR, which was given the responsibility for supervision of higher education. BOR's responsibilities include broad authority to supervise, coordinate, manage, and control the campuses in the university system. The legislature retains the power to appropriate funds and audit the system. BOR includes seven members with seven-year terms, each appointed by the governor and confirmed by the Senate. BOR appoints a commissioner to head OCHE. OCHE is the central administrative unit charged with implementing and communicating BOR's policy and directives to MUS campuses. As of fiscal year 2018, OCHE had a total of 57.13 FTE.

Historically, the structure of colleges in MUS included more independence between different campuses. Each four-year college, for example, had its own president and independently handled its own administration. In 1994, in response to continued decreases in state funding, BOR and OCHE pushed to restructure the MUS to create a more centrally structured and coordinated system of campuses by affiliating smaller campuses with one of the two flagship universities. A flagship university in Montana refers to a 4-year research university with both graduate and undergraduate degree

offerings. Montana's flagship universities are the University of Montana (UM) in Missoula and Montana State University (MSU) in Bozeman. While the restructure assigned each campus to a flagship affiliation and assigned the leaders of the smaller campuses report to a single president at a flagship university, the coordination and responsibility expected within each affiliation was not described in policy or law. As a result, the nature of each affiliation is largely dependent on the interpretation of the flagship presidents. For example, campus and OCHE staff report that in the early years of the affiliations, UM's president encouraged more shared services, while MSU's president largely allowed affiliate campuses more independence. In recent years the emphasis has shifted, with MSU's current president more focused on increasing efficiency through shared services. Figure 1 illustrates the current organization of the MUS. There are two affiliations, each headed by a flagship university. Each affiliation includes two four-year campuses and one two-year campus, as well as several "embedded" two-year campuses which are dependent on the accreditation and budget of the four-year campuses.



There are also three two-year community colleges independent from the rest of the university system. These colleges have separate governance by locally elected trustees, separately appropriated budgets, and support from local property tax levies, but they are subject to general oversight by the BOR. Additionally, seven tribal colleges are

further removed from MUS governance. They receive state funding for resident nonbeneficiary students and have their own governance structures.

Neither statute nor BOR policy provides written expectations regarding how coordination or centralization of university system services should occur or what the responsibilities of affiliate campuses are. Coordination and centralization of services varied from campus to campus and between flagship affiliations, as they developed the affiliation relationship in different ways and on different timelines. Centralization affects resource requirements for managing campuses, as well as the seamlessness of the student experience within the MUS. While legislative appropriations have increased in recent years, the state is still below the national average and below historic highs for state support per student FTE. Based on the State Higher Education Executive Officers (SHEEO) State Higher Education Finance (SHEF) fiscal year 2017 report, Montana's state contribution amounts to 81 percent of the national average for per student state support. When coupled with ongoing state tuition freezes, the amount of overall funding for higher education puts Montana in the bottom third of the country. The resulting resource limitations have prompted the desire and need for increased coordination between campuses.

Audit Scope

As part of audit assessment and planning work, we determined there were risks associated with the coordination of administrative and student services between the various MUS campuses. Consequently, we focused our work on overall examination of coordination within the university system at the campus, affiliation, and system levels. We examined two main areas of interest. These included seamless student enrollment and transfer, and shared administrative services. As part of our work, we visited 12 of the 13 campuses in eight different locations, including:

- ◆ University of Montana Missoula (UM)
- ◆ Missoula College (embedded in UM)
- ◆ Montana Technological University (Butte)
- ◆ Highlands College (embedded in Montana Technological University)
- ◆ Helena College
- ◆ Montana State University Bozeman (MSU)
- ◆ Gallatin College (embedded in MSU)
- ◆ Montana State University Billings
- ◆ City College (embedded in MSU Billings)
- ◆ Montana State University Northern (Havre)
- ◆ Great Falls College Montana State University

While we did not visit Bitterroot College, an embedded college of the University of Montana, we included student perspectives from that institution via a survey and in overall data analysis of shared administrative and student services. Additionally, Miles City, Flathead Valley, and Dawson community colleges, though not a part of the MUS, were included in some portions of our student transferability review. Tribal colleges were not included in the scope of the audit. The following sections further discuss our scoping considerations.

Seamless Student Enrollment

Seamless student enrollment refers to the ease of moving students from one campus to another for concurrent enrollment (attending more than one campus at the same time) or more traditional transfer of moving from one campus to another. Our assessment and planning work identified concerns among staff and legislators related to the ease of transfer between campuses, including the process itself and the application of prior campus credits at new campuses. Coordination of student enrollment or transfer between the different campuses within the system and within units was examined as a result. The process for students to initiate enrollment at a different campus was reviewed, along with the associated administrative procedures related to students transferring to a different campus. These processes were analyzed for efficiency and ease for students. Students who enrolled at more than one MUS campus between 2013 and 2018 were surveyed to determine if the process to move between campuses was efficient. Additionally, we reviewed the common course numbering (CCN) system used to facilitate the credit transfer between MUS campuses for consistency, effectiveness, and outcomes. CCN refers to the assignment of a single course prefix, number, and title for courses identified as 80 percent or more similar in learning outcomes across multiple campuses. Our survey also obtained information on any difficulties students experienced in transferring credits. Analysis of five years' worth of transfer data from the OCHE student data warehouse was used to assess the transferability of credits. To determine the effectiveness and performance of CCN, we conducted three types of analysis. These analyses included review of identical courses retaken by students after a transfer, identification and assessment of courses with different common numbers but very similar titles and learning outcomes, and the academic performance of transfer students relative to nontransfer students in a sample of sequential course pairs.

Shared Administrative Services

Shared administrative services refers to the coordination of service delivery in business processes and procedures between different organizations to improve efficiencies and control costs. We assessed three aspects of shared administrative services, including human resources (HR), business services (such as accounting, budgeting, accounts payable, and accounts receivable), and information technology (IT). Our assessment

and planning work identified these as commonly shared services in other university systems, with daily impacts on the function of a university system. As part of our work, key staff in each function were interviewed at each campus. Based on these interviews and campus documentation, we mapped the current structure and processes between the different MUS campuses and OCHE into shared services diagrams. For the IT portion of the review, we also examined any IT governance practices in use at campus and MUS levels. We identified the enterprise resource planning (ERP) and student information systems and software used by each campus. An ERP is an integrated software package that supports business functions in an organization, including accounts receivable and payable, HR, purchasing, and more. Student information systems are used by campuses to manage student data related to enrollment, grading, schedules, and more. In the MUS, both purposes are fulfilled by Banner, the main information system used across the MUS that includes modules for both student data management and business processes.

Audit Objectives

We developed the following two objectives to examine the coordination of administrative and student services between the various MUS campuses:

1. Determine if Montana University System student services ensure seamless student experiences in concurrent enrollment and transfer between campuses.
2. Determine if the Montana University System shares administrative services between campuses to avoid duplication of effort.

Audit Methodologies

To accomplish our objectives, the following work was conducted:

- ♦ Obtained and reviewed applicable BOR policy, strategic plan objectives, past meeting minutes, and select OCHE policies for seamless transferability goals and shared services, objectives, and action items to identify principles and standards by which to review system activities and responses to date.
- ♦ Identified and reviewed statute and administrative rules relevant to the Montana University System, as well as shared MUS policy goals, to identify state expectations for seamless student enrollment and shared services.
- ♦ Reviewed seamless student services initiatives in other states, particularly regarding the use of common course numbering systems, to identify best practices of CCN systems in similarly structured campuses to ease seamless student enrollment.
- ♦ Visited 12 MUS campuses to observe how student transfer and concurrent enrollment is working between campuses through interviews with campus staff.
- ♦ Surveyed current and recent students for the past two years who have transferred or were dually enrolled at multiple system campuses. This was

done to obtain perspectives regarding the process they went through, the efficiency of the process, transferability of credits, resulting graduation time frame, and if they could seamlessly move within the system to complete their study. Overall survey response rate was 10.6 percent, with a total of 1,287 students responding.

- ♦ Interviewed system and campus staff, including registrars and admissions staff at each campus, to identify the current CCN system processes to maintain, enforce, and monitor CCN policy.
- ♦ Obtained and reviewed the most recent OCHE compliance review of CCN to determine the effectiveness of current CCN system controls.
- ♦ Analyzed OCHE student warehouse data from 2013 to 2018 to identify potential instances of unnecessarily retaken courses between campuses, and measure the performance of CCN in student success in sequential courses taken at different campuses.
- ♦ Reviewed industry best practices related to shared administrative services in other state university systems. We focused on multi-campus affiliate systems to identify how structures similar to MUS implemented shared services.
- ♦ Reviewed shared service initiatives in other states to identify potential criteria and effect for shared services, including benchmarks for efficiency, processes for sharing services, and implementation of shared services initiatives.
- ♦ Assessed OCHE's current shared services initiative documentation, including shared services inventory and prioritization list, to identify past and present efforts to identify and coordinate share services.
- ♦ Examined past and current shared services initiatives at the campus level to assess how these efforts supplement and coordinate with the MUS effort to share services and increase efficiency and effectiveness of administrative services.
- ♦ Reviewed systemwide and campus IT governance practices and documentation to identify how IT has been managed and leveraged to coordinate shared services and seamless student transfer.
- ♦ During campus visits, observed how the current shared services initiative is being implemented at the campus level, and what services are already shared between campuses.
- ♦ Compiled and mapped a diagram of HR, business services, and IT office functions to identify currently shared services across the MUS.

Report Contents

The remainder of this report includes additional background and details of our work, conclusions, and recommendations. It is organized into two additional chapters:

- ♦ Chapter II examines the seamless student experience in the areas of institutional transferability and the application of CCN. It also presents recommendations to clarify and enforce a single student transfer process, and maintain and enforce the CCN process of the behalf of students.

- ♦ Chapter III presents information regarding our review of shared MUS administrative services in HR, business services, and IT. This includes an examination of how those efforts are managed by OCHE and discusses findings and recommendations to develop clear guidance on shared services and establish an IT governance framework.

Chapter II – Coordination of Seamless Student Enrollment Between Campuses

Introduction

One effect the dispersed structure of the Montana University System (MUS) is the complication of student transfer within the system. According to the National Student Clearinghouse, 38 percent of students transferred within a six-year time frame for the 2011 cohort of first-time students. With nearly two in five students expected to transfer during their education, the transfer process becomes a frequent experience for students. Due to the distinction between each MUS campus's leadership and the separation of many of the campuses' student information systems, processes were developed by the Board of Regents (BOR) to allow students to move more easily between campuses. BOR and the Office of the Commissioner of Higher Education (OCHE) have taken strides in recent years to address this: first with a special transfer process (transmittal of a single admissions file) for students transferring between campuses so they can avoid reapplying, and second with a common course numbering (CCN) system to increase the ease and predictability of transferring credits.

As part of our first objective, we sought to determine if MUS student services ensure seamless student experiences in concurrent enrollment and transfer between MUS campuses. We examined students transferring between different MUS campuses and reviewed OCHE's process to administer CCN. This included determining if the process provides a consistent model for the transfer of equivalent courses for students. Overall, we determined students are generally satisfied with their transfer experience, but OCHE should clarify and enforce a standardized student transfer process. We also determined, while OCHE has established a CCN process and campuses are overall adhering to CCN for transferring students, OCHE has not consistently maintained and enforced CCN practices. This chapter discusses our findings, conclusions, and recommendations to OCHE for clarifying a single student transfer process and maintaining the CCN process.

Board of Regents Has Developed Student Transfer Policies

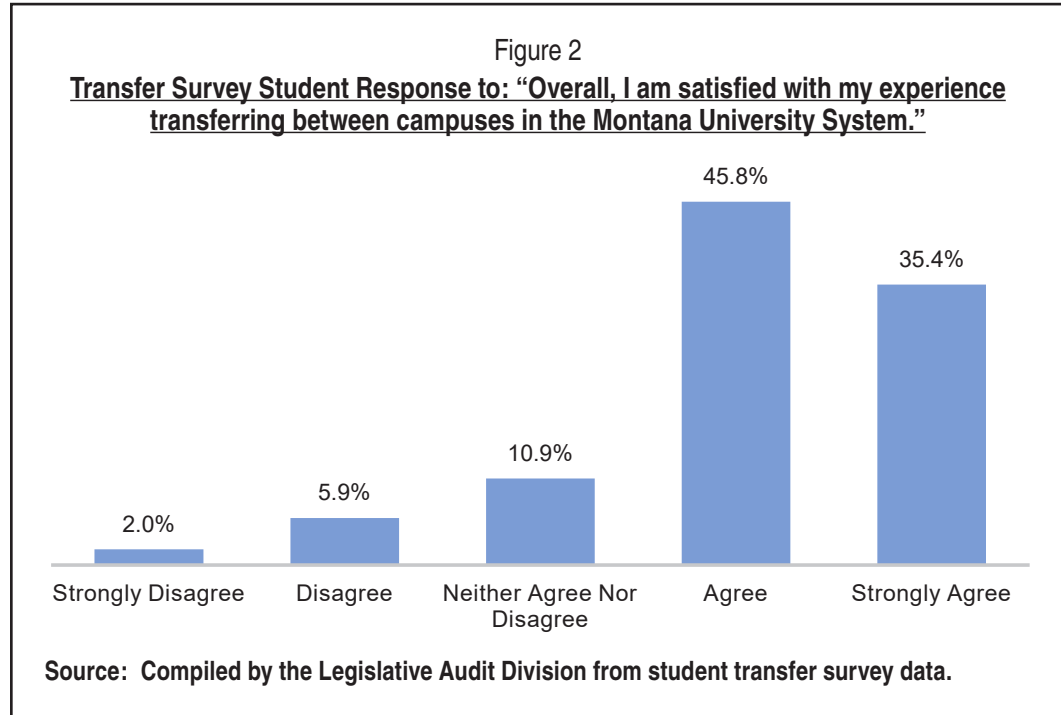
BOR Policy 301.5.4 requires campuses to use a single transmittal form for students transferring or concurrently enrolling at multiple campuses. This is an alternative to students reapplying at each MUS campus, including collecting and submitting transcripts, immunization records, and residency information. Instead students fill out a single transmittal form, and the sending institution collects the documentation and either mails or faxes it to the new campus. The policy specifies the single admissions file must include several documents, including an analysis of general education (core curriculum) coursework completed by the student. General education programs differ

between MUS institutions even within the same affiliation group, and there is a separate MUS core defined in BOR policy that applies only for students transferring between institutions. BOR General Education Transfer Policy 301.10 states students cannot be required to take additional general education coursework at the lower division level after transferring between MUS schools if the student:

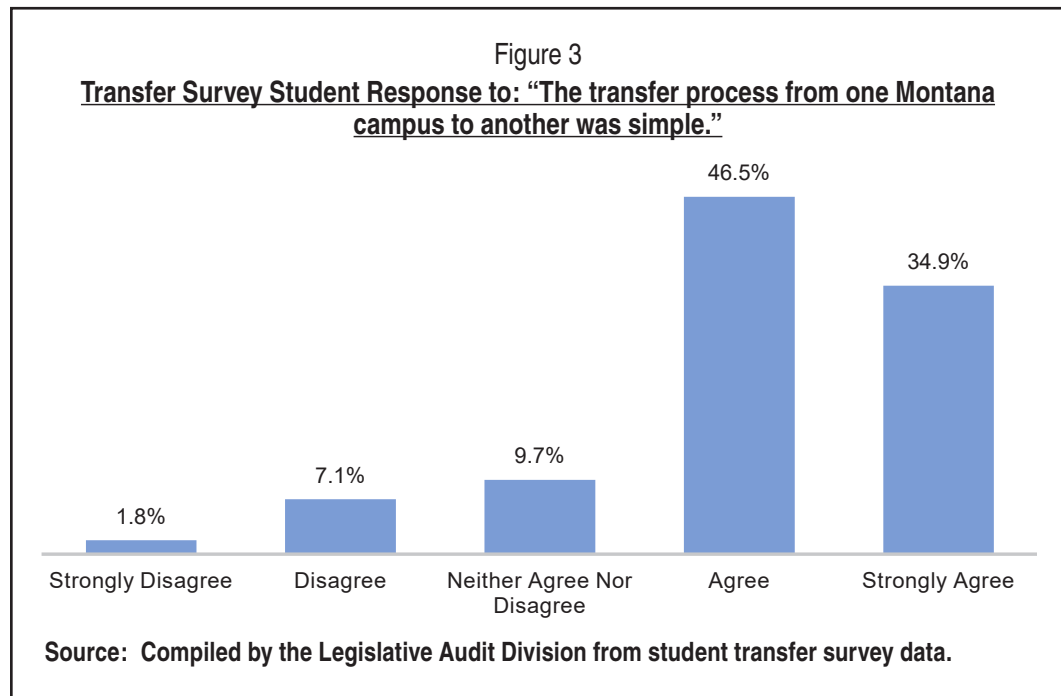
- ♦ Already completed the general education program at an MUS institution,
- ♦ Received an associate of science or arts degree with an approved general education component, or
- ♦ Completed a 30-credit MUS core as described in policy.

MUS Transfer Students Are Generally Satisfied With Transfer Experience

As part of our work, we conducted a survey of current and recent MUS students who took coursework at multiple MUS campuses. These students were identified via the OCHE student data warehouse, which compiles student data from all campus student data systems. Students were selected for the sample if they earned credits for coursework at more than one non-embedded campus. We surveyed 12,118 students who enrolled at more than one MUS campus between 2013 and 2018 regarding their transfer experience, and received a response rate of 10.6 percent. The survey included three sections: one to ask about the transfer of dual enrollment credit received while the student was in high school to an MUS campus after graduation; another to discuss their experience concurrently enrolling (enrolling in more than one campus at a time); and a final section to inquire about traditional transfer between campuses. As illustrated by Figure 2 (see page 11), respondents were generally satisfied with their experience. We found 80.1 percent of transfer respondents indicated they agreed or strongly agreed they were satisfied with their experience transferring between campuses in the Montana University System.



Our survey also asked about the simplicity of student transfer experience. The results show students generally found the transfer process to be simple, with 81.4 percent agreeing the transfer process from one Montana campus to another was a simple process (Figure 3).



These results indicate that overall the current transfer process is satisfactory for most students. We did, however, identify improvements that could be made to increase its effectiveness, including consistency and completeness of documentation included in transmittal forms, analysis of completion of core curriculum, and communication of the options for transfer.

Campuses Not Required to Submit Similar Student Information When Transferring

As part of our work we conducted site visits to 12 MUS campuses. We interviewed admissions and registrar staff to discuss how the current MUS transfer process was working both for their offices and students. Admissions staff described inconsistencies in documents included in single admissions files from across the state system. Some inconsistencies were contrary to BOR policy, such as not including an assessment of general education completion required in Policy 301.5.4. Other necessary documents were not specifically included in the list of required documentation, so are only provided by some campuses on their own initiative or interpretation of the policy. These items include immunization records, residency information, college admissions test results, emergency contact information, and completion of mandatory student safety tests. Also, campuses typically do not include a final transcript after the end of the term when students have complete grades for the courses they were attending at the time of initiating the transfer.

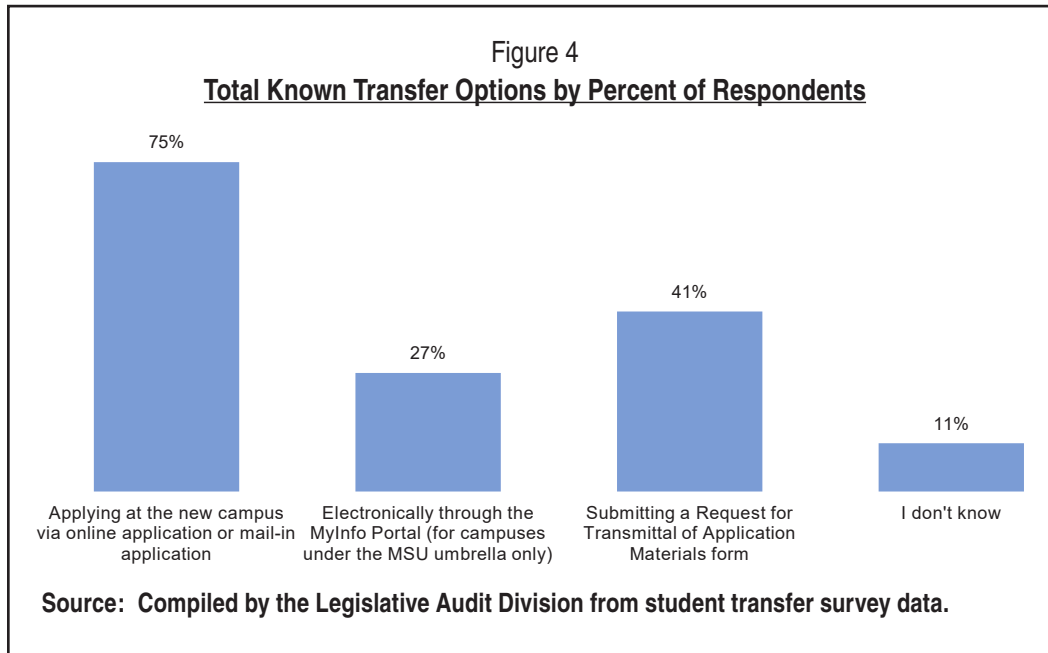
Review of MUS Core Curriculum Prior to Transfer Is Not Common

Our review of the required transmittal form noted it does not include a place to show the results of the core curriculum completion review required by BOR Policy 301.5.4, and policy does not describe how to communicate that core has been completed. Core curriculum refers to packages of required courses for undergraduate students necessary to provide foundational general education regardless of major. Within the MUS, campuses develop their own core curricula, but there is also an optional MUS level core specifically for students moving between MUS campuses. Policy 301.5.4 also does not provide a comprehensive description of all documentation needed in the packet to ensure a seamless student transfer. This has caused campuses to independently develop their own interpretations of the policy. For example, at the time of our audit, only one campus was actively checking and marking completion of general education core on their transcripts or transmittal packets prior to sending them to the receiving institution. Other campuses began marking core curriculum completion on their transmittal forms within the last year, including a review of MUS core. Additionally, the different level of technology between campuses means some campuses must do more manual review to mark outgoing transmittal packets with core completion.

Review of core curriculum completion is important in the transfer transmittal process as many students will not otherwise know that they have an option outside of completing the new campus core. In addition, the new campus may not realize the student has already completed what is needed. Therefore, students may end up paying more unnecessarily to complete their lower division core at the new institution because their credits are not appropriately applied to MUS core. Campus staff indicate the institutional core requirements are typically close between campuses, and they believe students do not usually have to take more than one or two additional courses if their completed core is not acknowledged in their transfer. However, this still costs students additional tuition to enroll in potentially unnecessary courses. For example, the average cost per credit at the two flagship universities is \$229. This can add up to \$1,374 for two three-credit courses. There is no measure of how many students experience this additional cost because there is no way to identify them in the OCHE student warehouse. However, OCHE staff indicate preliminary studies see only about 10 percent of students who transferred with credits to satisfy MUS core appear to have received credit for completing their core requirements when they transferred. Additionally, many of these students, due to the complexity of general core between different campuses, may never know they took unnecessary coursework.

Many Transfer Students Are Unaware of Transmittal Option

Our work found students were often not aware of the option to use the transmittal form, and consequently paid additional application fees and multiple transcript copy fees. According to our survey, only 41 percent of transfer students knew about the transmittal option while 27 percent knew about the electronic option for transfers between Montana State University (MSU) affiliated campuses. There was overlap between these responses, with ultimately 53.5 percent knowing about one or the other alternative to reapplying. The electronic option available to students transferring between MSU affiliate campuses allows students to login through their online student portal (MyInfo portal) to initiate a transfer, then automatically signals the appropriate campus staff to complete the process. This is possible for MSU affiliate campuses because they share a single student information system environment with each other. UM campuses each have their own separate student information system environment, which would make a similar solution difficult or impossible to implement without major changes to their IT infrastructure.



Availability of information for students regarding transmittals varies between campuses. A review of admissions and transfer website pages of different campuses found that at the time of review, neither flagship university had information available on the option for transmittal forms as an alternative to reapplication. MSU Billings (including City College), UM Western, Dawson Community College, and Flathead Valley Community College were the only campuses that specifically included the transmittal form on their admissions website. Helena College did mention the form and instructed students to call for more information. The remaining six campuses and two embedded campuses did not include any reference to transmittal as an alternative to reapplication.

Transferring using the transmittal form costs \$8 instead of the \$30 application fee (or more if using an electronic application) to apply as a new student. Additionally, the single student admissions file sent via the transmittal form includes at least one transcript, while reapplying would require students to request transcripts for additional fees. Some campuses, but not all, waive fees for students they realize are transferring from MUS campuses on a case-by-case basis if they instead reapply to the new campus. While the exact number of students who reapply rather than use the transmittal or electronic alternatives is unknown, survey results indicate only around half of respondents knew about the transmittal option. Campus admissions staff across the state estimated percentages of students using the transmittal between 20 percent to 50 percent, with the remainder of students reapplying and paying high fees to transfer between MUS campuses. However, due to a combination of separate campus system environments and an inability of campuses to easily identify all incoming students

eligible to use the transmittal form, it is difficult to estimate the true volume of students overpaying while moving across the MUS.

Additional Guidance and Structure Needed for Transmittal Ease and Consistency

While BOR created policy to provide for the transmittal of a single application file between MUS campuses, it does not define all documents needed to transfer between campuses. In implementing the policy, OCHE provided limited guidance on how campuses should develop their processes for administering the transmittal form or how to indicate completion of common core. OCHE also did not enforce the inclusion of documentation required by policy in the single application file by sending institutions. As a result, campuses independently developed their own interpretations of policy. Furthermore, campuses experience different levels of difficulty in processing transmittals due to a paper-based format and lack of assisting technologies, particularly between affiliations and at smaller campuses.

Campus staff indicated while the transmittal process appears to have simplified the transfer process for students, it has increased administrative work for campuses to implement. Campus staff said this has increased their administrative burden as more students choose the transmittal option. Prior to the transmittal option, students would have to reapply themselves at the new school, including collecting and sending all their paperwork to the new campus. Now the sending campus must collect and copy or scan these (often hard copy) documents for the new campus, and complete a core curriculum analysis to determine if the student met either the sending institution's or MUS core curriculum. While some campuses have degree audit software that helps speed up the core review process, not all do. Because of this, the sustainability of the current system is questionable if more students eligible to use the transmittal option choose to do so. Campus staff also said hard copy and scanned transmittal packets can get lost or take a long time to process. Therefore, some students choose to reapply to avoid the separate processing from other incoming students. According to campus staff, difficulties are related to the transfer process being entirely paper-based due to the lack of a centralized student data system, document imaging system, or use of other streamlining software. OCHE staff have indicated the centralization of separate campus student data system environments is infeasible at this time. They are considering developing an online system that would streamline campus admissions and enrollment, including routing paperwork for transmittal forms.

Overall, while there is a transmittal process in place and students are generally satisfied by their transfer experience, there are inconsistencies across the MUS that complicate the movement of students between campuses for both students and staff.

These inconsistencies cost students in additional fees and unnecessary core courses and require staff to take on increasingly heavy administrative burdens to circumvent the limitations and differences in software between the campuses.

RECOMMENDATION #1

We recommended the Office of the Commissioner of Higher Education develop an effective and standardized online process for the transfer of students between Montana University campuses, including:

- A. A comprehensive list of documents to be included in the single student admissions file, including a most recent end of term transcript,*
 - B. Indication of core completion on the transmittal form, and*
 - C. Consistent system-wide communication of the transmittal option.*
-

Common Course Numbering as a Means of Standardizing Transfer

Common course numbering (CCN) is the practice of assigning similar courses between campuses a single identifier. This typically includes a prefix signifying the subject area followed by a three-digit numeric code. For example, the CCN for College Writing I is WRIT 101. “WRIT” is a shared prefix with all other writing courses, while “101” is the distinct code for that specific course. According to a list of nationwide common course numbering at all public post-secondary institutions for lower-division courses, 27 state university systems have implemented CCN on some level. CCN implemented across the country varies in its structure. In some states, CCN only numbers common lower-division courses intended to count toward a systemwide general education core curriculum. In other cases, CCN primarily identifies specific community college courses that will transfer to a baccalaureate institution, to ensure transparency across any campus. Some states only establish a conventional numbering system to distinguish between different types of courses, but do not identify equivalent coursework. Montana’s university system is a national leader in CCN, as the MUS CCN system encompasses all courses in all MUS campuses, including higher-division coursework. Only four states, including Montana, have comprehensive CCN at both higher and lower divisions and between both community colleges and four-year campuses.

Common Course Numbering in Montana Is Defined in Board of Regent Policy

BOR Policy 301.5.5 relates directly to intersystem student transfer by creating a common course numbering system. This policy tasks OCHE with overseeing a process to review courses to identify potential equivalent courses. A common course prefix and number (CCN) and title are assigned to each group of equivalent courses. Courses with the same CCN are to be accepted by receiving campuses as if the courses were taken on their own campus. OCHE is responsible for maintaining an administrative guideline document detailing the requirements for the system. OCHE is also responsible for completing MUS compliance reports at the end of every term to ensure campus catalogues reflect the CCN system. This administrative guideline document outlines that the system shall be maintained by a designated CCN manager at OCHE and CCN liaisons at each campus. All undergraduate courses must be commonly numbered and reviewed for equivalency. The expectation is between 80 and 100 percent of equivalent courses, based on course learning outcomes, are provided the same prefix, course number, and course title to “directly transfer one-to-one across the Montana University System.” Any time content and outcomes of a course change substantially, or a new course is proposed, the course must be submitted to the CCN online system to be sent out to OCHE and other campuses for review. Course level compliance reports are run by OCHE at the end of each semester, and campuses are notified of all courses out of compliance with CCN requirements. The CCN liaisons are also expected to conduct periodic reviews and accuracy checks to ensure the university system CCN database accurately reflects course offerings at the institution. OCHE’s CCN manager also maintains the CCN database. The CCN database allows for electronic notification to campus liaisons of newly proposed courses that may be over 80 percent similar to existing courses. The CCN database also collects and routes approvals between the different campuses and OCHE.

CCN Implementation Improved Student Credit Transfer, but Maintenance Has Not Been Consistent

CCN was implemented in 2007 to “provide students with a reasonable level of transparency and predictability for the transfer of courses and credits.” The administrative guidelines require maintenance of the system, including course level compliance reports run by OCHE at the end of every semester. Campuses are then notified if they are not in compliance with CCN requirements. Between February 2016 and February 2018 campus staff could not recall receiving these reports. In February 2018 a new compliance report was run and identified approximately 43.7 percent of courses did not have learning outcomes associated with them, and an additional 2,940 courses were not listed correctly in the CCN system. Staff indicate that some of these courses

were never included in the CCN system to begin with or were no longer offered at the campuses but not updated in the system. The CCN manager worked with campus registrars and CCN liaisons to align courses with the CCN course guide, and recently updated thousands of courses in the system. As of March 2019, only about 1 percent of courses still need learning outcomes, and the number of unlisted or incorrectly listed courses has decreased 56 percent.

Site visit interviews identified potential problem areas in CCN related to the two-year lapse of active CCN maintenance. Campus staff expressed concern about “drift,” or change over time, in similarly numbered courses. Drift can lead to either increased differences in course content or differently numbered courses becoming over 80 percent similar. Campus staff also indicated the original faculty learning outcome councils (FLOCs), groups of campus faculty from across MUS that reviewed all courses within each academic field to determine which were equivalent and which were unique across the system, did not successfully agree to identify all very similar courses with the same course number. There were concerns raised by campus staff that there may be a handful of faculty not honoring the intent of CCN across the system. These faculty might purposefully misrepresent their courses to avoid common numbering due to their perception that another campus could not teach the course to a high enough standard to be accepted at their school. There were also reports of lingering issues with campuses offering similar course content but with such a differently structured curriculum that individual courses could not be commonly numbered, differences in whether science labs were embedded, and credit differences between commonly numbered courses. In fall 2018, OCHE coordinated new faculty councils to address some of these concerns and to work on new initiatives. To date, ten of these councils have met to review existing course prefixes, merge duplicative courses, and develop statewide articulation agreements in key disciplines. OCHE staff indicated they envision having regular meetings of these faculty councils, with annual or more frequent meetings in the short-term and targeted meetings on a strategic basis in the long-term.

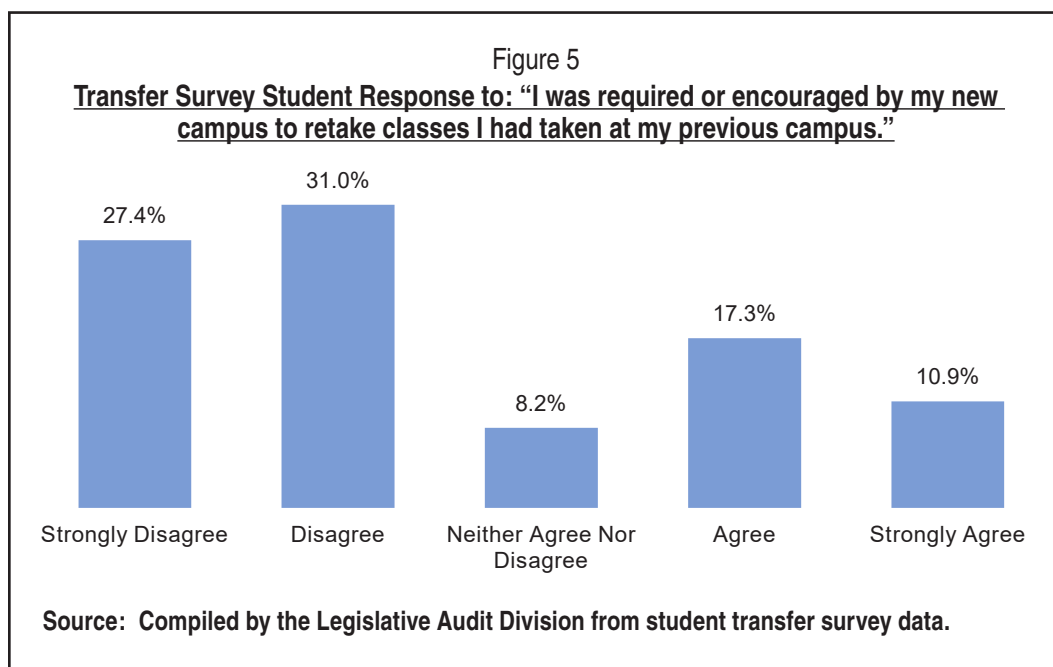
Other States’ CCN Systems Are Similar to Montana’s

We conducted a review of three other states’ CCN systems with similar features as Montana’s, including all undergraduate courses and spanning both two- and four-year campuses. These states also have similar university governance structures to the MUS. We found Montana’s system is comparable to the other similar states and has some additional controls, such as an electronic and formalized CCN system and policy mandated system audits. While overall Montana’s CCN appears to meet or exceed standards set by other states, we identified examples of embedded maintenance and enforcement efforts in other states that could further improve Montana’s CCN system. For example, Florida has an articulation coordinating committee tasked with addressing CCN noncompliance. As part of its statutory responsibilities it must

“annually review the statewide CCN system, the levels of courses, and the application of transfer credit requirements among public and nonpublic institutions participating in the statewide course numbering system and identify instances of student transfer and admissions difficulties.” Florida also has faculty discipline coordinators to address CCN transferability issues that are faculty related.

Students Experience Frustration in Transferring Credits

As part of our student transfer survey, we asked whether students agreed or disagreed with statements related to their transfer experience. While students overall expressed satisfaction with their transfer experience, several students expressed frustration with their experience getting credits to transfer. Forty-two percent of students agreed that they expected more of their credits to transfer to fulfill degree requirements. Over one-quarter responded they were either encouraged or required to retake courses they had already taken at their previous campuses. The figure below provides student responses related to their transfer experiences.



In addition to responding to the above survey question, we also received 227 open-ended responses from transfer students. Of these responses, 80 described problems with getting credits transferred by either having to retake the same or similar courses, felt pressure to retake courses, or had to go through a lot of effort to get courses accepted for credit. We identified a pattern of students who expressed dissatisfaction with their credit transfer in their self-reported field of study. The top four areas included:

- ◆ Biomedical sciences/health/human development (21 students)
- ◆ Business (18 students)

- ♦ Engineering/mining (15 students)
- ♦ Education (15 students)

We also reviewed the data to see if there was a pattern to complaints regarding the transfer of credit based on recipient campus. We found that complaints appeared generally proportionate to the number of respondents transferring to each campus. For example, we found while MSU included half of the complaints we received, we believe this was partially due to more respondents having transferred to MSU than other campuses.

Student Data Analysis Work Assessed CCN Performance

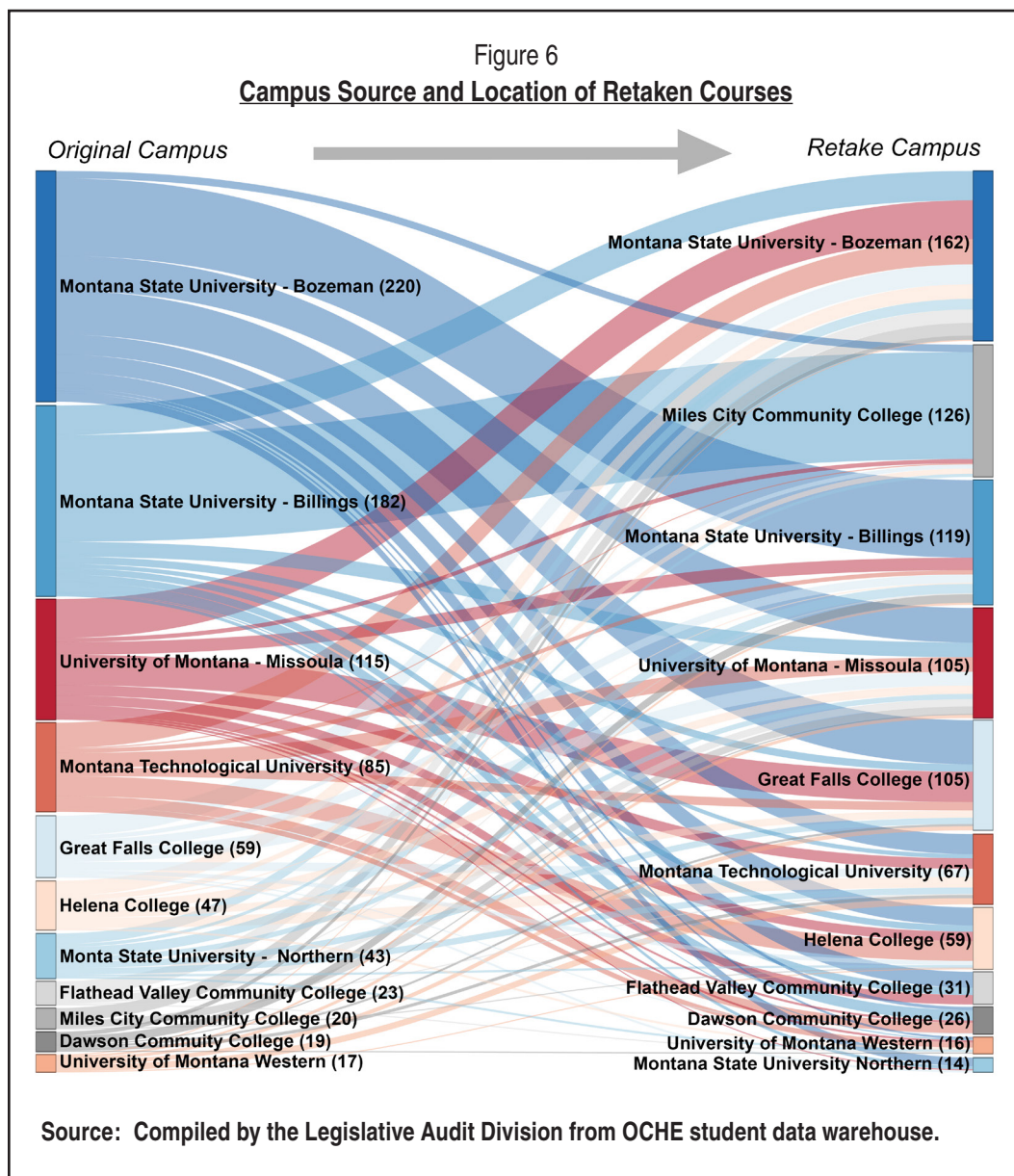
As part of our work, we conducted analysis of student warehouse data collected by OCHE and reviewed of the CCN course catalog in three ways:

1. Identified courses passed then retaken at a new campus,
2. Reviewed instances in which courses flagged by staff and students with different CCNs but similar titles and learning outcomes were passed, then taken again at different campuses, and
3. Compared the performance of students in sequential course pairs when courses were taken at the same campus vs. different campuses.

Overall, our work identified that students are not frequently retaking similar or identical courses after moving between campuses, and transfer and nontransfer students appear to perform similarly in sequential course pairs. The following sections discuss the results of our analyses in more detail, including impacts to students within the MUS.

Unnecessary Course Retakes Happen, But Are Not Common

Of the 1.7 million courses taken for a letter grade in the Montana University System between 2013 and 2018, we identified 830 instances (.04 percent) of students passing a class at one campus only to retake that same course at a different campus later. Figure 6 (see page 21) shows at which campuses these 830 instances were originally passed and then retaken. The campus on the left was the original campus at which the course was passed by the student, with the total number of courses originally taken at that campus in parentheses. The campus at which the course was subsequently retaken is shown on the right, with the total number of passed courses retaken at that campus in parentheses. The lines between the two sides show the volume of credit movement between campuses. This figure shows the systemwide pattern of potentially unnecessarily retaken courses across the system.



Some classes may be retaken for the sole purpose of increasing a student's overall GPA, to meet prerequisite grade requirements to get into subsequent courses with competitive entry, or to increase the chances of acceptance into competitive programs. Based on campus and OCHE staff explanation, nursing and allied health majors are more likely to retake courses for grades due to higher GPA requirements for certain programs. We found a disproportionate number of retaken courses were by students taking a course first at MSU-Billings, then retaking it at Miles City Community College (12 percent) between 2013 and 2018. We found nearly 76 percent of the students retaking a course from MSU-Billings at Miles City Community College were allied health or nursing majors. Further inquiry found some of the commonly retaken science courses were

offered by Miles City Community College online. These results indicate that many students retaking courses at Miles City Community College may have retaken courses to improve their grade. However, of all 830 instances of retaken courses, only about one-third of them were of students in these major fields. Several of the most frequently retaken courses were also not health oriented, with the top five retaken courses as follows:

- ◆ Intro to Psychology (96 instances)
- ◆ Intro to General Chemistry (84 instances)
- ◆ Human Anatomy & Physiology I (76 instances)
- ◆ College Writing I (71 instances)
- ◆ College Algebra (41 instances)

While the overall number of instances of unnecessary course retakes is difficult to determine and does not appear to be significant, review and enforcement of the CCN system can help identify potential patterns of problems to improve student experience. Even if all allied health and nursing related majors were assumed to retake courses only for the intent of raising their GPA, and all other majors were doing so at the behest of their new campus, the instances identified in this review would total an additional \$375,789 in unnecessary tuition spent by students on retaking courses (based on an average flagship university tuition of \$229 a credit, and an average of three credits per course, for 547 retakes of nonhealth majors). This is also equivalent to lost student time, with each course equating to approximately 135 hours of unnecessary class and study time, based on the average three hours of class time and six hours of study time outside of class per week.

Student Retake of Similar Courses With Separate Common Course Numbers

Based on registrar interviews and student survey results, there were several course types we identified as having different common course numbers, but appeared to be the same course with very similar titles and learning outcomes. Some of these courses appear to be considered by campuses, outside of CCN, as equivalent. In these cases, while there appeared to be identical courses with different CCNs, there were no students found who took both versions of the course. Other courses, however, did have instances of students passing one course prior to transfer only to retake a differently numbered but very similar course after their transfer. For example, 11 individuals were found to have taken both ECNS 204 and ECNS 201, both foundational microeconomic courses, at different campuses. Another 5 individuals retook remedial math equivalent courses between MSU and UM over the time frame evaluated. Several apparent general CCN duplications or inconsistencies were identified between campuses, such as in education,

where there were multiple versions of Introduction to Education and two separately numbered courses related to the history and challenges of teaching.

CCN Does Appear to Identify Sufficiently Equivalent Courses

If CCN successfully identified similar courses to be commonly numbered between campuses, we would expect that students taking courses that are part of a sequence of prerequisites would have similar grade performance in latter courses, whether they transferred campuses between the courses or stayed at a single campus. To assess this, we analyzed students' performance in a sample of paired sequential courses consistently offered across the MUS, including:

- ◆ BIOH 201 Human Anatomy and Physiology I & BIOH 211 Human Anatomy and Physiology II
- ◆ CHMY 121 Introduction to General Chemistry & CHMY 123 Introduction to Organic Chemistry and Biochemistry
- ◆ ECNS 201 Principles of Microeconomics or 204 Microeconomics & ECNS 301 Intermediate Microeconomics with Calculus or 300 Intermediate Microeconomics
- ◆ WRIT 101 College Writing I & WRIT 201 College Writing II
- ◆ PSYX 100 Introduction to Psychology & PSYX 340 Abnormal Psychology
- ◆ M 121 College Algebra & M 161 Survey of Calculus or M 162 Applied Calculus

We found that the average grade of transfer and nontransfer students in the second course of the sequence did not differ in a significant or practical way. First, performance was assessed based on raw outcomes of the letter grade in the first course and the average grade in the second course by students who took both courses at the same campus versus those who took them at different campuses (Table 1).

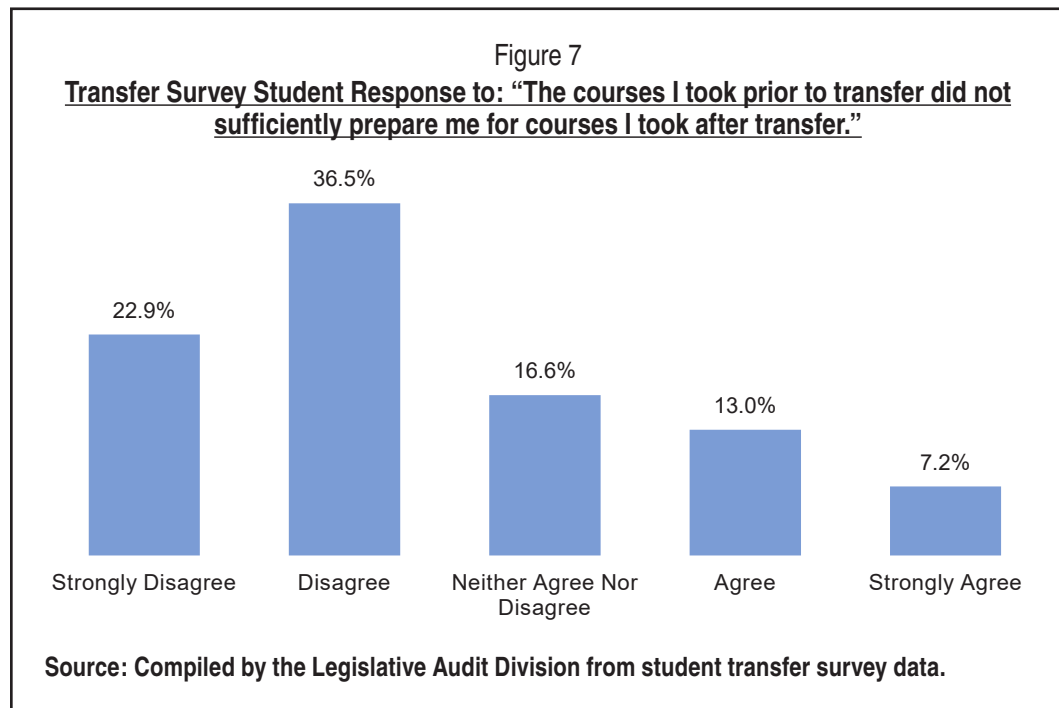
Table 1
**Comparison of Second Course Sequence Outcomes for Students by
 Grade, Same or Different Campuses**

Same Campus for Sequential Course Pairs		Different Campuses for Sequential Course Pairs	
First Course Letter Grade	Average Second Course Grade	First Course Letter Grade	Average Second Course Grade
A	3.41	A	3.1
B	2.61	B	2.46
C	1.9	C	2.25
D	1.33	D	2.46
F	0.97	F	1.2
P	2.41	P	3.7

Source: Compiled by the Legislative Audit Division from OCHE student warehouse data.

As illustrated by the table, there are differences in the average second grade between the two groups of students. High achieving students appeared to perform better in their second course if they did not transfer, while lower achieving students experienced the opposite result and performed better in the second course if they did change campuses for their second course. To determine if the average performance of the two groups differed statistically, we also compared the overall average of the second course grade between the two groups. We found the two groups do not perform significantly differently from each other. The results of this analysis suggest that common course numbering has identified courses that are overall similar enough as not to see major differences between students' performance if they take sequential courses at the same campus or different MUS campuses.

These results were supported by the transfer survey response of students. Most respondents disagreed or strongly disagreed that they were unprepared for coursework at their new campus. Though 20.2 percent indicated they believed they were insufficiently prepared, as illustrated in Figure 7, OCHE staff indicate this a positive rate of response. OCHE staff would anticipate a similar percentage of nontransfer students to feel similarly unprepared as they move into higher division coursework. Audit work did not develop any comparative information for nontransfer students to determine if this assessment is correct.



The condition of transfer of credits for students appears generally positive. However, we have identified some improvements that OCHE should consider to increase the likelihood of long-term success.

Over Time, CCN Has Not Been Consistently Maintained

CCN was implemented to provide a common labeling framework for equivalent MUS courses to make it easier for students to transfer courses between campuses. OCHE coordinated with campuses to arrange for faculty learning outcome councils (FLOCs) to identify similar courses, develop prefixes, and assign CCN to all active courses that were offered at more than one campus. However, not all courses were maintained in the CCN system or updated with the learning outcomes decided on by the FLOCs. Some FLOCs were never able to decide on solutions to differences in curriculum between classes that made CCN difficult to use in transfer between programs. Problems associated with maintenance and other issues were not addressed, as OCHE has not continuously improved or consistently maintained CCN to ensure it remains timely to the university system environment. For example, according to campus staff, BOR policy was not followed for the maintenance of the CCN system due to turnover in OCHE's CCN manager position. At least two years went by with no CCN campus compliance reviews conducted, despite BOR policy requiring reviews at least once a semester. This contributed to not addressing issues of courses not complete or updated in the CCN system. Additionally, changes in courses over time or historic curriculum

differences were not revisited by FLOCs after the initial implementation. New campus staff and campus faculty were not consistently notified of their role in maintaining the CCN system.

The establishment of the CCN system was a positive effort to address transferability of MUS equivalent courses for students. However, without consistent maintenance of the system, the burden of administration on the campuses will increase and the accuracy of the system will decrease. It appears there are some courses that are not commonly numbered with each other that meet the qualifications to share a CCN, and differences in curriculum between some similar programs offered at different campuses. This decreases the effectiveness of CCN to provide a transparent transfer experience between MUS campuses. Furthermore, historically there has not been an assessment of the performance of CCN completed by OCHE and communicated to campus staff. Documentation of the results of a systemwide student survey or data analysis reviewing the effect of CCN on students would help identify the success or shortcomings in the system over time, and provide buy-in from campus staff. As staff at both OCHE and at the campus level turn over, it will continue to be important that registrars, CCN liaisons, and CCN managers understand their responsibilities for supporting and maintaining the system over time.

RECOMMENDATION #2

We recommend the Officer of the Commissioner of Higher Education consistently maintain and enforce common course numbering, by:

- A. Consistently conducting compliance reviews of campus courses to ensure they are updated in the common course numbering system,*
 - B. Periodically reassembling faculty learning outcome councils by discipline to review courses,*
 - C. Conducting and documenting analysis to identify potential problem areas in transferability of coursework and common course numbering, and*
 - D. Developing ongoing training for campus registrars and common course numbering liaisons.*
-

Chapter III – Coordination of Shared Administrative Services

Introduction

The coordination of efforts between consolidated campuses with distinct independent cultures is a challenging but important consideration in the era of rising higher education costs and decreasing higher education funding. Shared administrative services initiatives and information technology (IT) governance are two common ways to increase coordination among campuses to decrease costs through economies of scale, improve student experiences, increase employee specialization, create consistency of business processes, and limit duplication of processes and software. Shared administrative services aim to strategically and purposefully identify opportunities for streamlining, coordinating, and consolidating campus processes.

This chapter addresses our second objective, to determine if the Montana University System (MUS) is sharing administrative services between campuses to avoid duplication of effort. We found the Office of the Commissioner of Higher Education (OCHE) has created a foundational shared services initiative to create opportunities to share administrative services between campuses. However, there is limited definition and guidance for system and campus staff regarding areas of priority for sharing, including a review of existing duplication, potential cost savings, and strategic guidance outlining goals and objectives for shared services. Similarly, we found while there are MUS strategic goals in IT governance, current efforts at the campus level are siloed and result in inconsistent IT resource coordination between campuses. This chapter discusses our findings, conclusions, and recommendations to improve shared administrative services and IT governance between MUS campuses.

Shared Services Initiatives

A shared services initiative aims to strategically and purposefully identify opportunities for streamlining and coordinating processes of units in a system to guide consolidation of processes. Shared services structures vary between organizations depending on unique needs. Some may involve consolidating services from multiple institutions into fewer shared services centers, with the original institutions still involved at some level with the processes. These centers can be structured in different ways, including top-down shared services centers located in a central administrative office or more distributed shared services hubs housed at campuses but providing services for others. For shared service centers to work, a best practice is to use service level agreements to clearly outline service and output expectations of both service providers and units working with them.

Shared services initiatives are common in the private sector, but are increasingly being adopted by public institutions, such as university systems, to meet the challenge of shrinking state support. Traditionally, campuses were independent, both administratively and academically, and had their own entrenched practices, processes, and cultures. The result is university systems often find themselves with generalist staff in campus departments performing many different types of administrative activities. The goal of moving toward shared services is for fewer or even single providers to absorb specialized administrative activities for several units. The process of moving these tasks to a shared provider allows for consideration of process simplification and automation. It also allows for better service and decreased need for resources in administrative areas by leveraging economies of scale and specialization. A key aspect of the success of shared services is the availability of information systems to reroute work outside of traditional administrative units and develop automated workflows. To ensure these systems are in place and meet system needs, there should be strategic and planned use of information technology through systemwide IT governance. The importance of IT governance to shared administrative services is discussed later in this chapter.

Shared Services in the Montana University System

The Board of Regents (BOR) established a system goal of delivering efficient and coordinated services. This goal is outlined in both its strategic plan and its shared policy goals established with the governor's office and the legislature. The metrics identified in its strategic plan to measure the efficiency and coordination of its services included a review of the proportion of expenditures by program spent on instruction, academic support, and student services. To meet this goal for efficient and coordinated services, OCHE began a shared services initiative in January 2017 described as an effort to meet the goal of efficient and coordinated services. This shared services initiative is spearheaded by OCHE. It is described in its strategic plan as a collaborative effort between MUS campuses and OCHE to pursue and achieve system-wide efficiencies to:

- ◆ Improve MUS administrative business and support activities to provide better service to students and faculty on each campus.
- ◆ Leverage resources across the university system.
- ◆ Reduce MUS duplication and costs.

The initiative began by inventorying self-reported shared services from the IT and business services leaders of the flagship campuses. Based on this inventory, a short list of shared services was developed in May 2017 to prioritize projects based on logistics, costs, and achievability. The list included 20 potential shared services areas divided into three tiers with associated timelines of short-term (less than one year), mid-range (1-3 years), and long-range (greater than 3 years). Many of the identified items

concentrated on narrow areas, described by both OCHE and campus staff as areas identified as being the most obvious and feasible items given resource constraints. The shared services list has not been updated since its inception, but staff indicated some of the items on the list have been completed or are in progress. Staff said other items were deemed infeasible or had not been discussed further. Some of the results of this work included initial implementation of a shared online benefits enrollment system and plans to create a shared MUS procurement officer. OCHE's shared services initiative also includes a taskforce consisting of campus vice presidents and vice chancellors of administration and finance, one IT representative and one procurement representative from each flagship campus, and two OCHE representatives. OCHE management indicated they have monthly phone calls primarily to discuss opportunities for sharing services.

Current Campus Reporting Structure Will Limit Inter-Affiliation Service Sharing

Contrary to BOR Policy 205.2.1 and state statute (§20-25-305, MCA), the reporting structure of the University of Montana (UM) affiliation has been diverted to report directly to the commissioner of higher education rather than the president of UM. Policy has not been updated to accommodate this change, which was described in a letter from the commissioner to UM's accrediting agency as a temporary measure to assist during the previous interim president's term, which ended in January 2018. The commissioner has indicated they have no current plans to return the reporting structure of the affiliates back to the UM president. While we acknowledge the change in reporting structure during the interim may have been necessary, it should be resolved now that there is permanent leadership in place at UM. This reporting structure and lack of guidance regarding the future of the affiliation further confuses the direction and intent of future coordination of campus efforts. Continued differences between the reporting structure of the UM affiliation and the Montana State University (MSU) affiliation is expected to increase differences between the coordination of the campuses within the two affiliations over time. It is also expected to decrease the overall amount of affiliation-wide sharing planned within the UM affiliation.

Shared Services Are Inconsistent Across the University System

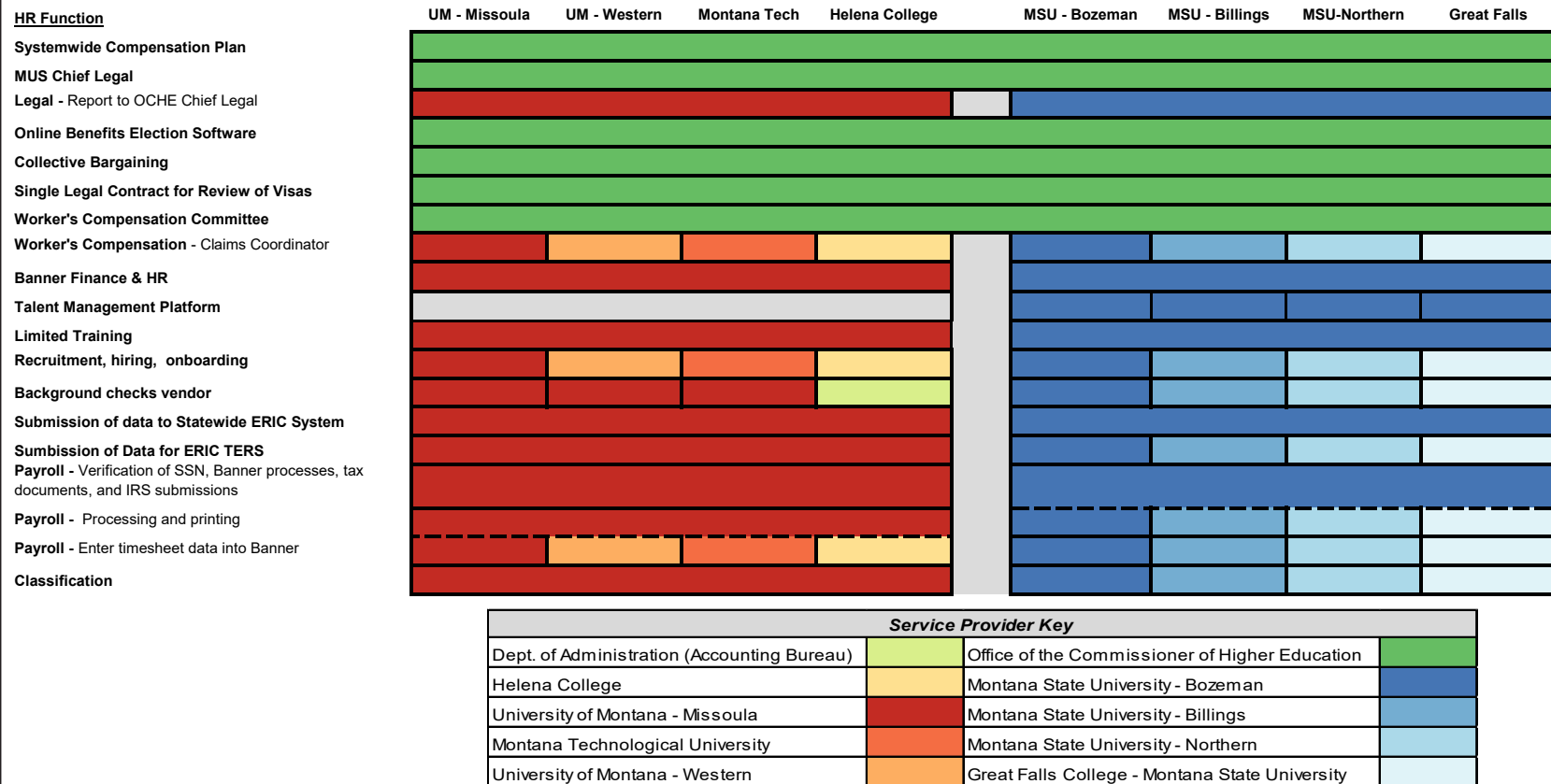
Our work included site visits and interviews with business services, human resources (HR), and IT staff at 12 campuses. We asked staff to explain the key functions of their offices and what aspects of their work were coordinated or shared with other campuses in the system. Based on these interviews and review of documentation such as organization charts and descriptions, shared services fee tables, and staff-developed

shared services lists, we diagramed key services and software related to HR, business services, and IT. We then identified what portions of each function were conducted at each campus, and those campuses providing functions that were shared. Where applicable, the name or vendor of the software in use at each campus was named to identify areas of potential duplicate licensing or potential differences in software-dependent business processes. Overall, we identified few shared services at the MUS level and a distinct separation in the sharing of services between the two flagship affiliations. For services within each affiliation, we found inconsistencies between the two flagship groups regarding which services were shared or not. In some cases, it appeared as if the campuses themselves were not certain which services were independent or which were shared. The following sections discuss inconsistencies we identified in sharing services related to HR, business services, and IT.

Human Resources

Figure 8 (see page 31) illustrates shared HR functions and sharing between campuses. In this case, there are more system-level coordinated services and IT software than in other functional areas. OCHE coordinates collective bargaining and holds a single chief legal position for the MUS, among others. However, there are differences in HR functions shared within each of the affiliations, indicating potential opportunities for increased sharing. For example, we noted the UM affiliation shares more than the MSU affiliation, with classification and payroll processes coordinated or shared between all the UM affiliate campuses. These functions are all separate between the MSU campuses (i.e. not shared), with each campus having its own classification and payroll processes. The figure below shows on the left side each major HR function identified in field interviews across the MUS. The service as provided by each campus is illustrated by the boxes, with the lines indicating separation between services and dotted lines indicating there is some overlap between responsibilities in the different functions. The color within each box illustrates which entity is providing the service or license contract for that service. In some cases the service provider may be the same, but the boxes are separated due to differences in who initiates the process.

Figure 8
Montana University System Shared HR Services

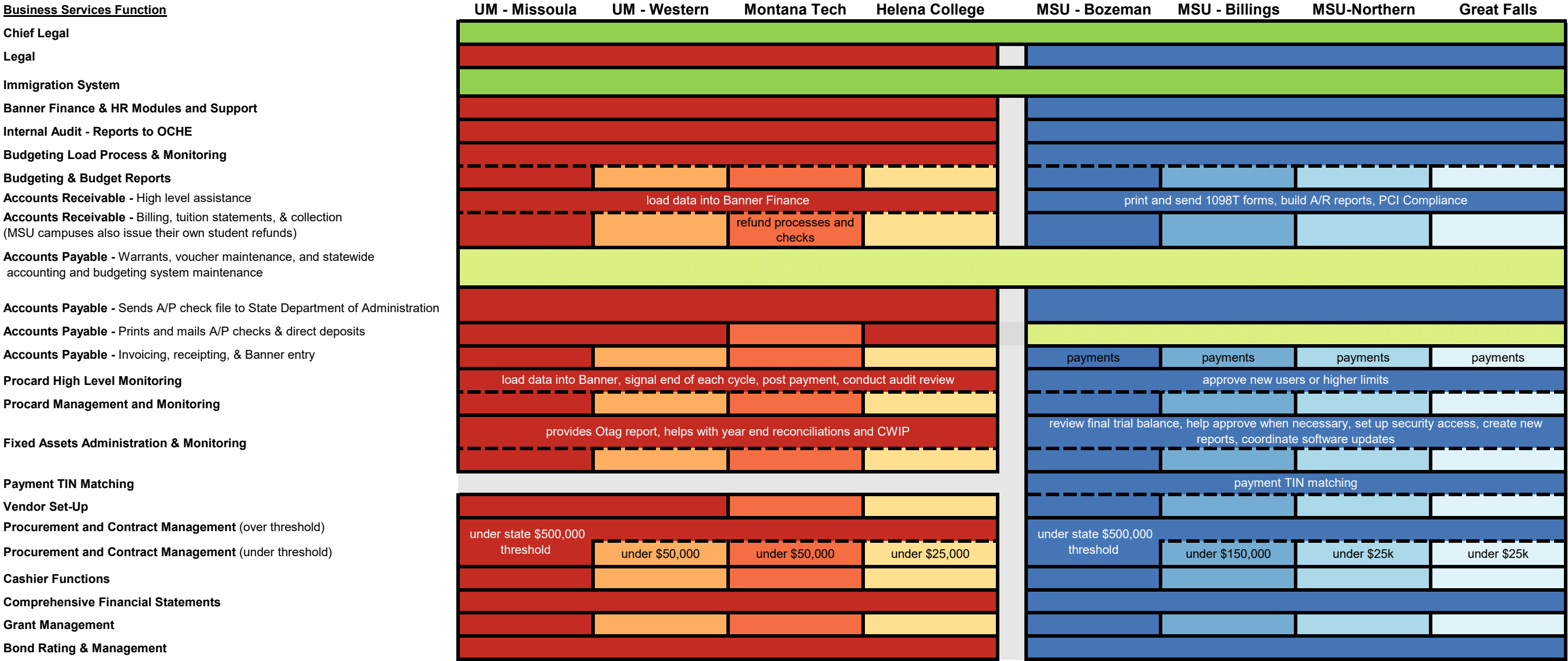


Source: Compiled by the Legislative Audit Division from staff interviews and campus documents.

Business Services

In business services, we found some business service functions are fulfilled at the state level. For example, all MUS campuses use the Department of Administration's (DOA) procurement portal to issue and receive requests for proposals. Warrants and MSU affiliate accounts payable checks are issued by DOA. We also found the UM and MSU affiliations are similar in the extent services are coordinated and shared between the campuses. Examples include accounts receivable, accounts payable, budgeting, procard management, fixed assets management, and procurement. We also found some portions of these services are completed separately at each campus, while other tasks are completed by the flagship campus for all affiliate campuses. For example, UM has a shared procurement and contract management system for all campuses to use, while MSU's affiliation does not. This indicates that if there are additional opportunities for sharing between campuses, they are not currently realized by both affiliations. However, there is already an aspect of sharing in most business services functions. Figure 9 (see page 33) shows the major business services functions at each campus, the system office, and a relevant portion at the State of Montana. This figure illustrates business services functions on the left side using colored boxes showing where each function is supported and shared. Business services were more varied than the other functions in the specific duties that were shared across each affiliation. Details of the differences of each function are included within the box.

Figure 9
Montana University System Shared Business Services



Service Provider Key			
Dept. of Administration (Accounting Bureau)		Office of the Commissioner of Higher Education	
Helena College		Montana State University - Bozeman	
University of Montana - Missoula		Montana State University - Billings	
Montana Technological University		Montana State University - Northern	
University of Montana - Western		Great Falls College - Montana State University	

Source: Compiled by the Legislative Audit Division from staff interviews and campus documents.

Information Technology Services

Currently, there are a handful of shared IT licenses or systems administered by OCHE. This includes its new online benefits enrollment software, an immigration system, and a student safety testing license. Our work found more differences exist between UM and MSU affiliations in this area than in the business services and HR functions. When it comes to enterprise resource management systems for HR and Finance, each side has a single system shared with the affiliate campuses. UM additionally shares more IT networking and access with campuses, such as through shared Wi-Fi access. When it comes to various software licenses, we found MSU more consistently shares licenses and associated services between campuses. They not only share a single student information system, but also smaller items such as fixed assets software catalogue management software, and secure file sharing options. These differences in sharing between the affiliations indicate potential opportunities for additional sharing within the MUS. Figure 10 (see page 35) shows the IT services and some of the software licenses and how they are shared between campuses. As with the prior two figures, the functions are listed to the left, with the entity providing the function marked in the colored box to the right. In this case, software is also included in the figure, with the specific vendor or software provider included where available. Software and associated services are divided into three groups: more traditional IT services, business services/management related systems support, and student related software/systems support.

Figure 10
Montana University System Shared IT Services and Software

IT Services & Software

Network Security and Traffic Monitoring
Network Connectivity
Data Center Services
WiFi Access
Telephony
Educause Membership
Shared Security Certifications for Secure Connections
Cisco License
Insurance for Information Security
Data Management Hub
Password Reset Solution
Two-Factor Authentication
Data Loss Prevention Solution
Central Repository for Data Definitions
Helpdesk Software

Business Services/Management Related

State Accounting, Budgeting, and Human Resources System
System to Issue RFPs, IFBs, and Manage Contracts
Online Benefits Enrollment Software
Immigration System
Mini RFPs System
Banner - Finance & HR
Student ID Card Software
Procurement System
Content Management System
Website Design
Fixed Assets
Scheduling Software
Secure File Sharing
Digital Transaction Management
Department & Student Online Billing System
Cloud-based Creative Subscription
Cloud-based Office Subscription
Video Conferencing Software
Job Scheduling Software

Student Focus Related

Student Banner Modules
Library Resource Management Software
Customer Relationship Management
Degree Audit Software
Student Retention Software
Catalogue Management Software
International Student System
Course Evaluation Software
Scholarship Management
Video and Screen Recording Software

Emergency Services Alert System
Survey Subscription
Statistical Software
Literacy Software
GIS Software
Student Online Safety Courses System

UM - Missoula	UM - Western	Montana Tech	Helena College	MSU - Bozeman	MSU - Billings	MSU - Northern	Great Falls
				</			

Campus Level Shared Services Initiatives Are Independent From OCHE Efforts

To increase various shared services within campuses, each flagship campus has completed or explored its own shared services initiatives independent of each other, its affiliate campuses, and OCHE. MSU, for example, identified several areas for shared services on its Bozeman campus in a campus-wide initiative to centralize and streamline administrative and student services. To implement these shared service areas, MSU created specialized task forces, new organization charts, action plans, and road maps for each identified area. While MSU periodically gave reports on this effort to BOR, it was done at the behest of the president of the university. Due to UM's changes in leadership in recent years, it is also going through structural and procedural changes to increase efficiency and effectiveness. In the past, UM had one initiative related to shared IT services on its Missoula campus. This effort specifically looked at how IT could be further consolidated and coordinated centrally for UM's different colleges and departments. All the campus efforts described here address processes on the campus level and do not include affiliate campuses.

Systemwide Shared Services Efforts Indicate Incomplete Planning and Stakeholder Engagement

While campus staff overall support the goal of recent shared services efforts, they express frustration with the planning, implementation, and maintenance of recent projects. During our audit, there were several systemwide rollouts of shared services-related projects. Some efforts were successfully completed, including the procurement of a single dining vendor for most of the campuses and a single library resource management software for the system. OCHE also recently changed its procurement arrangement with the state to allow for greater visibility into contracts entered into by campuses and has hired a new part-time procurement staff to handle MUS-level licenses and contracts. There were however some shared systemwide administrative initiatives that encountered difficulty in implementation at the campus level. These are described below:

- ♦ **Benefits Enrollment Benefits Administration:** This was a systemwide implementation of online benefits enrollment completed on a preliminary basis in March 2019. After two extensions of the launch of the site, MUS was forced to implement due to there no longer being a working back-up after that point in time. Campus staff indicated implementation did not consider the reality of different campus information systems and process requirements. This led to additional system and process changes by some campuses to work around the implementation by the vendor.

- ♦ **Biweekly Payroll:** This effort was aimed to align all MUS campuses' time frame for payroll. Campus staff indicated they were not provided guidance on how to adjust and align their processes, but were given a tight deadline. The deadline was delayed multiple times due to issues unforeseen by OCHE, such as unreasonable implementation time frames and additionally required process changes. OCHE has suspended this effort due to a realization it would not gain the benefits anticipated. In the meantime, campus staff effort was spent trying to plan a realignment of their processes in response to the initiative. Furthermore, campus staff indicate that they were not coordinating across the flagship affiliations while rerouting their processes to accommodate this change. This means that the two affiliations would still have different processes in place if one day the system office wanted to move toward centralized check printing and direct deposit.

Successful Shared Services Include Project Management Principles and Best Practices

Shared services initiatives have been implemented in both the private and public sectors, including recent examples in higher education. To identify best practices of successful multi-campus shared services initiatives we reviewed three other state university system shared services efforts. We reviewed systems in South Dakota, Minnesota, and Missouri based on similar structures as Montana, including a central administrative office and multiple campuses with independent leadership. These states have adopted best practices for developing and maintaining shared services initiatives. They identified the need for:

- ♦ A systemwide study and documentation of the status quo.
- ♦ Identification and prioritization of potential administrative areas for change.
- ♦ Stakeholder engagement across the system and through different levels of the identified administrative function, including frontline workers.
- ♦ A formal project road map and long-term implementation plan.
- ♦ Formal agreements outlining the responsibilities of proposed shared service centers and campus staff.
- ♦ An ongoing structure for identifying future sharing opportunities after the initial restructuring.

Current Shared Services Effort Is Underdeveloped

OCHE has not fully developed, defined, nor implemented guidance regarding statewide priorities for shared services, including measurable actions and goals. While OCHE has issued directives for initiatives for system-wide implementation, we found these directives do not always include systematic analysis of how to best implement changes, formal guidance and communication on how to get there, the

goals of the directives, appropriate timelines, and support that will be provided after implementation. Campus staff indicated they are not certain what the goal of shared services is. For example, they are unsure if this means shared services only within affiliate campuses or for MUS as a whole. Campus staff said this makes it difficult to know the best course of action when they adjust processes at the campus level to accommodate OCHE directives.

Apart from the initial shared services inventory and monthly taskforce phone calls, there has not been additional systematic assessment of the different functions and services across the university system. In particular, the current functions that are unshared have not been documented or reviewed for the capacity or desirability to share. Furthermore, the currently prioritized shared services list is not based on any formal analysis of the potential cost savings or need to share these services. Campus frontline staff most familiar with daily operations have been inconsistently included in the planning and implementation of shared services in their function areas. OCHE has not developed guidance for campuses, including the responsibilities and expectations in developing, implementing, and maintaining shared services, overall initiative goals, or the steps necessary to implement specific shared services projects. By developing a stronger shared services framework with elements similar to states that have successful shared services initiatives, OCHE can improve the planning, implementation, and long-term sustainability of shared services across the MUS.

RECOMMENDATION #3

We recommend the Office of the Commissioner of Higher Education improve the use of system-wide shared services by:

- A. Expanding efforts to evaluate current services and the capacity to share those services across the system,*
 - B. Prioritizing shared service areas deemed most critical based on areas of highest need and with highest potential costs savings,*
 - C. Involving and obtaining input from both administrative and frontline staff from campuses across the system,*
 - D. Developing a long-term plan detailing the goals and necessary steps to implement shared services across the system, and*
 - E. Implementing prioritized shared services based on campus input and shared services goals.*
-

IT Governance Is Essential for Organizations to Reach IT & Shared Services Goals

Higher education systems across the country have grown their technology landscape over time, often independently within units divided by physical and administrative separation. As relationships between campuses change, the technology silos remain throughout the organization without intervention. Without intentional coordinated management and oversight of IT across the system, these gaps and deficiencies related to siloed efforts remain indefinitely. This makes it difficult to share information across campuses and functions or compile accurate data for decision-making or risk assessment. Furthermore, administrative processes are often centered around an available IT solution. This means when the system desires to implement shared services, any effort will require significant overhead in both consolidating diverse IT systems and changing business processes.

IT frameworks help define ways for an organization to implement and monitor IT governance to effectively use IT resources and processes within an organization. IT governance is typically described as a decision-making process ensuring the effective use of information technology to help achieve goals by applying IT resources in optimal ways. System-level IT governance has been implemented in unique ways across the country to fulfill systemwide technology goals and coordinate multi-campus efforts. Other states with multi-campus systems use system level IT governance in different ways. For example, Minnesota established a system level chief information officer who put together a formal governance structure, including a cross-institutional membership steering committee. South Dakota established a centralized technology center to handle all computing purchases and coordinate network activity to promote sharing hardware, software, and IT-related services.

Board of Regents Has Developed System IT Goals

The Board of Regents (BOR) has included in its strategic plan under their goal of efficiency and effectiveness three IT strategic directions. The first of these strategic directions is a goal to incrementally develop an integrated information system. The purpose is to maximize administrative efficiencies, allow for seamless student enrollment between campuses, and promote consistent business practices across all institutions. It includes assumptions this will occur using incremental steps to develop a single integrated information system. BOR has a policy (920.1) which directs campuses to seek approval from the commissioner or designee for purchases of IT-related equipment and services over \$50,000, unless it has no systemwide impact or is acquired with funding having specific reporting and approval processes.

University System IT Governance and Products Are Siloed Between Affiliations

Presently, IT governance and planning are siloed between campuses with limited or inconsistent coordination between campuses and OCHE. The MUS does not have a single enterprise resource planning (ERP) system. The campuses use the same product (Banner) for their ERP. However, campuses have separate system environments and structures (instances) between them. There are five different instances of Banner for student modules for eight different campuses, and two instances of Finance/HR Banner modules between UM and MSU affiliations. Our work found while there was some sharing of software at the affiliation level, there was limited sharing between the two affiliations, with only a handful of cross affiliation systems. Often the two affiliations have the same software provider, but separate licenses and software structures. To assess the level of IT shared services, we interviewed campus staff throughout the university system. We also reviewed documentation, including OCHE's shared services software and services lists generated by campus staff specifically for the audit, past licensing pricing splits, and online lists of software. We used this information to identify IT services which are shared, not shared, and partially shared. The result of this work is shown in Table 2 (see page 41). We found 43 service and software categories and identified 23 cases in which software was shared in one campus affiliation but not the other. For example, we found an emergency alert system was shared among the UM affiliation but not the MSU affiliation, while course evaluation was shared in the MSU affiliation, but not the UM affiliation. Without such diverse IT software solutions, the MUS university system is unable to apply IT resources in optimal ways to benefit the system.

Table 2
Software Licensing Sharing Between the Affiliations

IT Software or Service	UM Affiliation	MSU Affiliation
Network Security & Traffic Monitoring	shared	shared
Network Connectivity	shared	shared
Data Center Services	shared	shared
Wi-Fi Access	shared	not shared
Telephony	not shared	not shared
Educause Membership	shared	shared
Shared Security Certifications	shared	shared
Networking Licenses	shared	shared
Insurance for Information Security	shared	shared
Data Management Hub	not shared	shared
Password Reset Service	not shared	shared
Two-Factor Authentication	not shared	shared
Data Loss Prevention	not shared	shared
Central Repository for Data Definitions	not shared	shared
Helpdesk Software	not shared	not shared
Banner Finance & HR	shared	shared
Procurement Software	partially shared	N/A
Student ID Card Software	partially shared	N/A
Content Management System	shared	shared
Website Design	not shared	partially shared
Fixed Assets Software	partially shared	partially shared
Scheduling Software	partially shared	not shared
Secure File Sharing	not shared	shared
Digital Transaction Management	not shared	partially shared
Online Billing System	N/A	shared
Cloud-Based Creative Subscription	shared	not shared
Cloud-Based Office Subscription	not shared	shared
Video Conferencing Software	not shared	shared
Student Banner	not shared	shared
Library Resources Software	shared	shared
Customer Relationship Management	not shared	shared
Degree Audit Software	not shared	shared
Student Retention Software	not shared	N/A
Catalogue Management Software	not shared	shared
International Student System	N/A	partially shared
Course Evaluation Software	not shared	shared
Scholarship Management Software	not shared	partially shared
Video and Screen Recording Software	shared	not shared
Emergency Services Alert System	shared	partially shared
Survey Subscription	shared	shared
Statistics Software	partially shared	not shared
Literacy Software	shared	not shared
GIS Software	shared	not shared

Source: Compiled by the Legislative Audit Division from staff interviews and campus documents.

There is currently not a means to easily identify and compare IT resources across the university system. Campus staff were largely unaware of the BOR IT policy requiring campuses to alert OCHE when they make IT purchases over \$50,000. Those that were aware of the policy believed the dollar threshold was too low and that it was not clear if or how they should report these purchases to OCHE. Campuses were also not clear on what kind of purchases impact the system as defined by BOR policy. We noted campuses are not consistently maintaining information about software licensing they use, with only two of the eight standalone campuses maintaining some form of software catalog. This increases the difficulty in identifying potential opportunities to share IT licensing or other IT services. Recently, OCHE has worked with the DOA to adjust how procurement works for the system and hired a part-time MUS procurement officer. The intent is to use the state procurement program to develop an MUS-wide contract database and increase OCHE's visibility into procurement activity across the MUS. OCHE has also recently expanded the cooperative purchasing language for use in requests for proposals and contracts by campuses. This will allow other campuses within the system to more consistently take advantage of service price, terms, and conditions negotiated by other campuses.

Disparate IT Governance Leads to Difficulty in Aligning Processes and Enrolling Students Across the System

Due to this separation in IT governance between campuses within the MUS, there have been missed opportunities to share licenses and frustration on the part of staff and students in dealing with different systems and accessing needed information. One example provided by campus staff described the efforts required by campuses to implement a degree audit program that ties into the student modules of Banner. Because the instances of student Banner are separated on the UM side of the system, UM campuses must pay each additional one-time costs to set up, in some cases as high as \$70,000. This one-time cost is prohibitive for smaller schools, so they have chosen to pursue other options. In our student survey related to transfer, some students expressed frustration with having to log into different systems and having to resubmit information when they transfer to another campus or concurrently enroll between campuses. Registrars and admissions staff expressed similar frustration and described the current transmittal process to send student data between campuses as increasingly time-consuming. They said this was at least partially due to the separation in IT systems or different levels of access to IT solutions across the system. Because of this separation of IT systems, some campuses and students reported issues with transmittal loss and delay for processing.

IT Governance Is Decentralized and Inconsistent

Though OCHE and the BOR have systemwide IT goals, they do not have a systemwide IT governance framework to strategically guide and support campuses to meet those goals. Without this guidance, and due to the dispersed nature of IT at the campus level, campuses have not adopted strategies to meet systemwide goals. Historically, all campuses had a great deal of independence and developed their own culture and practices over time. In 1994, the campuses were consolidated into either UM or MSU affiliations. However, the affiliation structure and relationship were left up to each president. Over time, the nature of this relationship similarly has changed from leader to leader. Ultimately, they ended up with different, already established IT systems that will be increasingly difficult to realign. Without long-term strategic planning in place, this likely may never happen. Furthermore, campuses indicate without systemwide leverage, it may be difficult to encourage vendors to allow consolidation of licensing. Campus and OCHE staff indicate due to the separation of major systems and processes, further consolidation or sharing of IT and even other services will be difficult to administer. We acknowledge aligning the IT systems of the different campuses will be difficult and will require a long-term, incremental process. It will also require systemwide guidance and a formalized plan on how to accomplish this. However, without a systemwide IT governance framework, MUS will continue to operate in a siloed manner that does not promote system efficiencies nor benefit students as efficiently as possible.

RECOMMENDATION #4

We recommend the Office of the Commissioner of Higher Education develop a university system information technology governance framework, in conjunction with system campus staff, to:

- A. *Review, analyze, and update the university system strategic information technology goals,*
 - B. *Formalize campus roles in meeting goals and involve them in the goal-setting process, and*
 - C. *Pursue shared information technology procurement between individual campuses to strategically align software investments.*
-

OFFICE OF THE
COMMISSIONER OF
HIGHER EDUCATION

OFFICE RESPONSE



MONTANA UNIVERSITY SYSTEM

A-1

OFFICE OF THE COMMISSIONER OF HIGHER EDUCATION

560 N. Park - PO Box 203201 - Helena, Montana 59620-3201
(406) 449-9124 - FAX (406) 449-9171

June 5, 2019

Angus Maciver
Legislative Auditor
PO Box 201705
Helena, MT 59620-1705

RECEIVED
JUN 06 2019
LEGISLATIVE AUDIT DIV.

Dear Mr. Maciver,

Please find attached the response from the Office of the Commissioner of Higher Education (OCHE) to the performance audit on the Montana University System Coordination of Student Enrollment and Administrative Services.

We want to express our appreciation for the hard work and diligence of your staff throughout this audit. The recommendations from this performance audit will help OCHE to improve the common course number process, as well as strengthen our shared services effort and IT governance as it relates to student transfer across the system.

We look forward to working with your office in the future.

Sincerely,

Clayton T. Christian
Commissioner of Higher Education

MONTANA UNIVERSITY SYSTEM**Response to System Coordination and Administrative Services Audit****June 5, 2019**

This document represents the response from the Montana University System to the performance audit on System Coordination and Administrative Services.

Recommendation #1

We recommend the Office of the Commissioner of Higher Education develop an effective and standardized online process for the transfer of students between Montana University campuses, including:

- A. A comprehensive list of documents to be included in the single student admissions file, including a most recent end of term transcript,
- B. Indication of core completion on the transmittal form, and
- C. Consistent system-wide communication of the transmittal option.

CONCUR. OCHE concurs with this recommendation and will work with MUS campuses to develop an effective online process to facilitate students transferring between institutions. Transfer policies will also be reviewed as part of this process. We expect substantial progress with deliverable results to be made by September 1, 2020.

Recommendation #2

We recommend the Office of the Commissioner of Higher Education consistently maintain and enforce common course numbering, by:

- A. Consistently conducting compliance reviews of campus courses to ensure they are updated in the common course numbering system,
- B. Periodically reassembling faculty learning outcome councils by discipline to review courses,
- C. Conducting and documenting analysis to identify potential problem areas in transferability of coursework and common course numbering, and
- D. Developing ongoing training for campus registrars and common course numbering liaisons.

CONCUR. OCHE understands the importance of upholding the integrity of common course numbering. OCHE will begin immediately working with the MUS campuses to institute regular compliance reviews, assemble faculty review groups, identify potential problem areas and develop a schedule of ongoing training. The majority of this work is currently being undertaken and will be completed by July 1, 2020; however, this will be a business improvement process that will occur on a continuous and ongoing basis.

Recommendation #3

We recommend the Office of the Commissioner of Higher Education improve the use of system-wide shared services, by:

- A. Expanding efforts to evaluate current services and the capacity to share those services across the system.
- B. Prioritizing shared service areas deemed most critical based on areas of highest need and with highest potential costs savings,

- C. Involving and obtaining input from administrative and frontline staff from campuses across the system,
- D. Developing a long-term plan detailing the goals and necessary steps to implement shared services across the system, and
- E. Implementing prioritized shared services based on campus input and shared services goals.

CONCUR. OCHE is committed to continually looking for areas throughout the MUS where services can be shared. In conjunction with MUS staff and administration, OCHE plans to revitalize its shared services efforts. OCHE will further define the efforts and goals of shared services by identifying target areas and prioritizing potential shared services through increased collaboration and communication with campus staff, as well as a renewed charge to the shared services task force and increased focus on analysis and cost savings. Initial work in this area will be completed by December 31, 2019. Over the following year, OCHE will engage in an evaluation of the shared services models and adopt a long-term plan.

Recommendation #4

We recommend the Office of the Commissioner of Higher Education develop a university system information technology governance framework, in conjunction with system campus staff, to:

- A. Review, analyze, and update the university system strategic information technology goals,
- B. Formalize campus roles in meeting goals and involve them in the goal-setting process, and
- C. Pursue shared information technology procurement between individual campuses to strategically align software investments.

CONCUR. OCHE will work with MUS information technology staff to immediately begin delineating the appropriate IT governance framework for setting goals, formalizing roles, and align software investments. This new structure will be in place by July 1, 2020, and we will incrementally work towards aligning IT systems.