5 – Resources, Planning, and Institutional Effectiveness

The institution's resources, structures, and processes are sufficient to fulfill its mission, improve the quality of its educational offerings, and respond to future challenges and opportunities. The institution plans for the future.

5.A – Core Component 5.A.

The institution’s resource base supports its current educational programs and its plans for maintaining and strengthening their quality in the future.

1. The institution has the fiscal and human resources and physical and technological infrastructure sufficient to support its operations wherever and however programs are delivered.
2. The institution's resource allocation process ensures that its educational purposes are not adversely affected by elective resource allocations to other areas or disbursement of revenue to a superordinate entity.
3. The goals incorporated into mission statements or elaborations of mission statements are realistic in light of the institution's organization, resources, and opportunities.
4. The institution's staff in all areas are appropriately qualified and trained.
5. The institution has a well-developed process in place for budgeting and for monitoring expense.

The institution has the fiscal and human resources and physical and technological infrastructure sufficient to support its operations wherever and however programs are delivered.

Fiscal Resources
5.A. 1. As the fiscal 2017 financial report indicates, Missouri S&T has adjusted campus expenditures to accommodate for state funding reductions. University revenues demonstrate finances are well managed and sufficient to support operations. The reason for state appropriation reductions in fiscal 2017 was due to the State experiencing revenue growth of $229 million which triggered the first tax cut under Senate Bill 509. That tax cut will span into the next two fiscal years but the S&T campus is fiscally stable and can adjust for further reductions.

Human Resources
Missouri S&T’s human, fiscal, and physical resources are key elements of the campus strategic plan and are aligned to support the mission, vision, and values of the university; and are continually assessed to ensure they are sufficient to support current and future needs and position the university to maintain and reach aspirational goals.

In addition to the appropriate physical and IT resources, a strong human resource supports our operations. According to our Common Data Set, 93% of our full-time instructional faculty have terminal degrees. The Common Data Set reports a student faculty ratio of 19:1.

Human Resources has well-established processes for screening and hiring staff members. This recruitment process includes reviewing job postings prior to dissemination, ensuring the candidate pool undergoes an equity review and that interviewees meet minimum and preferred qualifications, with finalists submitting to criminal background checks. Guidelines and policies are available online at S&T Human Resources Talent Acquisition.

Physical Infrastructure
Missouri S&T has a physical infrastructure capable of supporting the mission of the university. The 284-acre campus boasts 98,798 classroom sq. ft., 105,155 sq. ft. of teaching labs with open labs yielding 90,456 sq. ft. and research labs boasting 225,300 sq. ft. Athletics and student recreation currently has...
128,271 sq. ft. of space but an expansion to the fitness center in 2019 will nearly double the square footage. The campus has 19 academic buildings; six research support facilities; eight residential housing facilities; one dining hall; a food court in the Havener Center offering eight different options; a café in the library; a dining option on the south side of campus; and a large student recreation center (fitness center, intramural sports, indoor practice facility, and turf fields).

Since beginning operation in 2014, the Missouri S&T Geothermal Energy Project has served the heating and cooling needs of 17 buildings and augmented the campus chilled-water system, which serves many of the university’s ancillary facilities. Savings yielding from this system is expected to be $2.8 million annually over 30 years. The system includes 789 wells with pipes creating closed geothermal loops serving three primary campus geothermal plants and a satellite geothermal system. The primary plants are housed in the Straumanis-James, McNutt, and Bertelsmeyer Halls, while the satellite system is in the Gale Bullman Rec Center. Each of the plants contain heat pump chillers that provide geothermal energy to surrounding areas of campus. Supplemental cooling towers and gas-fired boilers are integrated into the new systems to ensure stabilized operating temperatures, even under the most demanding load requirements.

Campus Master Plan
Beginning in the fall of 2013, the master planning process relied on extensive campus and community involvement through the use of advisory and steering committees, open campus meetings, surveys, and interviews. Alumni, faculty, staff, students, and administration in consultation with community leaders helped define the future vision for the Missouri S&T campus, which led to the production of the plan document in the spring of 2014. An abbreviated process was completed between October of 2016 and March of 2017 to update the master plan. The primary objectives of the plan were to improve pedestrian safety along Bishop Avenue (Hwy 63); to renovate and right-size facilities to improve utilization and reduce deferred maintenance. Deferred maintenance has been reduced by $60 million with the implementation of the geothermal project. An additional $10 million reduction in deferred maintenance was achieved by razing The Quad housing and replacing it with additional campus parking. In April 2017, the Board of Curators adopted the 2017 Campus Master Plan update.

Space Committee
The Space Committee is authorized and established by the Chancellor. It is responsible for evaluating requests for space, and for recommending to the Chancellor all changes in assignment of classrooms, offices, laboratories, and research facilities. The committee is also charged with the responsibility of initiating studies designed to further improve the utilization of on-campus facilities. The committee is comprised of the following members: Vice Chancellor for Finance and Operations, Assistant Vice Chancellor for Design and Construction Management, Chief Information Officer, Professor from Electrical & Computer Engineering, Vice Provost for Research, Assistant Vice Chancellor and Dean of Students, Registrar, and a Professor from English & Technical Communication.

Safety
Besides the physical infrastructure another way to protect the university mission is through a safe environment. Missouri S&T projects the atmosphere of safety and security, enabling the campus community to function in their respective roles. The University Police Department maintains direct daily liaison with campus partners including Student Affairs, Student Services, Counseling, Disability, and Support, Institutional Equity and Diversity, as well as student groups including international students and student government organizations. The University Police Department participates in various committees and councils including the Rolla Crisis Intervention Team, the UCARE Team, and the A-Team (alcohol awareness organization). When complex projects emerge, the University Police Department partners with other campus departments to form task forces and working groups. Situations in which task forces and working groups have been established include a security phone application recently purchased for the campus community and the installation of security cameras on campus.
The University Police Department is a 24-hour/seven days a week Police Department. The University Police Department is comprised of twelve full-time commissioned Law Enforcement Officers, five non-commissioned Security Guards, and sixteen part time Student Campus Service Officers. The University Police Department often supplements manpower intensive periods and special events with reserve officers. There are currently six Reserve Officers on staff with the University Police Department. The Reserve Officers are commissioned police officers. Missouri S&T Police Department is accredited by the International Association of Campus Law Enforcement Administrators (IACLEA).

Technological Infrastructure
Missouri S&T has a flexible and comprehensive infrastructure to support the academic and research mission of the university.

Computer Learning Centers
● IT supports 32 learning centers with a total of 790 computers running Windows 7 and migrating to Windows 10
● IT supports hundreds of software titles for users in learning centers and desktop computers
● IT provides and supports a high-performance 3D, CAD and graphic multi-workstation that includes Dell, Apple, and HP computers in the campus library

Desktop Support
● IT supports 4,555 faculty, staff, and student computers on campus
● IT supports 531 network attached printers
● IT provides a Student Print Management System service, including wireless web printing (2,224,573 printed pages in 2016)
● IT provides 3D printing and scanning services with two commercial 3D printers available for all students; IT has printed 1,633 3D objects since fiscal 2014

Collaboration Support
● Google Apps Suite
● Cloud Storage with Drive
● Student email with Gmail
● Zoom web conferencing

Research Technology Infrastructure
● Direct support to campus High Performance Computing (HPC) users for both local and remote HPC facilities
● Supports local HPC facilities for both academic and research efforts. These annually upgraded facilities include 3,224 physical machines of various generations clock speeds and mfgs, 57 TeraFlops calculated total compute capacity, mined FDR and EDR infiniban environment, 17.25 TB total memory 5.5GB/core average, and 105 compute nodes
● Develops and maintains working relationships with national computational labs and regional academic institutions for collaborative support and computational resource allocation
● Provides total flight services to campus-affiliated research teams, both manned and unmanned for research-focused remote sensing
● Participate in the Great Plains Network Consortium

Network Infrastructure
● Supports both wired and wireless network connectivity for campus users, distance learners, residential and Greek housing and satellite locations within the state
● Supports 29,500 active wired network connections
- Supports 985 (631 802.11N, 354 802.11AC technology) wireless access points
- Internet connectivity runs on a 10G dedicated dark fiber network with a peak usage of 812.4Mb/s, average usage 274 Mb/s

Server Infrastructure
- Supports over 500 VMWare based virtual servers
- Supports a Virtual Desktop Infrastructure (VDI) for distance learning for approximately 800 students

Education Technology
Education Technology offers a comprehensive range of services to enhance teaching and learning. The department provides consultations on student learning, and course design and redesign. Education Technology oversees the learning management systems: Canvas and GSuite for Education; Respondus, a tool for creating and managing exams that can be printed or directly sent to Canvas; Qualtrics, a survey tool for faculty and staff; Diploma, a test and question generation tool that can deliver paper-based tests and integrate with LMS; Tegrity, a lecture capture application which is compatible with Canvas; Kaltura, a video-streaming service for faculty; TurningPoint Cloud technologies to enhance student performance in the classroom; Adobe connect for web conferencing; and Virtual desktop infrastructure for faculty, staff, and students. Education Technology is also committed to faculty excellence through Curators’ Teaching Summits and Teaching Partners Program.

Program Delivery
Using best pedagogical practices, Missouri S&T is evaluating courses and discovering new pathways for accomplishing the course goals in all redesigned courses, not just the lectures. The processes used to create DELTA (Delivering Experiential Labs to All) labs have been documented in order to create a collection of redesign guide sheets. This collection is being piloted at Missouri S&T and will eventually serve as a course redesign handbook for use by any instructor or instructional designer interested in laboratory course redesign. Many courses have been redesigned through campus funding allocations and through a variety of grants.

A number of courses have gone through significant redesign since 2012. Missouri S&T has been recognized for its innovation in course design and received an Online Learning Consortium 2015 Effective Practice Award honoring its innovation in online education. One example is the microbiology lab which improved student preparedness, optimized laboratory time, and provided an inquiry-based laboratory experience. The redesign utilizes a flipped classroom model where students watch introductory videos, complete online quizzes, and then are provided close-up demonstrations of techniques. The general chemistry lab was redesigned into a blended format where students conducted half of the course activities in traditional lab settings (in-the-lab) and half of the activities in common spaces on campus (in-the-commons).

Missouri S&T is transforming undergraduate science and engineering programs to a blended/online delivery format. Part of this process includes laboratory kits from Hands-On-Labs and eScience Labs. One example, custom lab kits were developed for the civil engineering mechanics of materials lab.

Course Share
The campus participates in the UM System-funded inter-campus course sharing model. Missouri S&T offers courses through this system which combines online, video conferencing, and traditional teaching. The S&T shared courses offered are: architectural studies, civil engineering, philosophy, and technical writing.

Calculus Redesign
The university allocates funds for redesigned high-volume courses. A series of high-volume courses redesigned were Calculus I, II and III. In fall 2014, Calculus I piloted an interactive lab. The new interactive lab met one day per week for 75 minutes. The lab was open to any student enrolled in a Calculus I lecture. The lecture was standardized, interactive, and has a limited class size of 30 students.
Two faculty taught the pilot labs and worked closely together to develop interactive activities for the students in fall 2015. Four sections of the new Success for Calculus were taught to 140 students and three sections were taught in spring 2016. In fall 2015, new Calculus II labs were piloted. Calculus III labs were piloted in spring 2016. Student success activities for calculus students were also created and implemented. In order to enhance student success in the calculus series, the following activities occurred: 1) diet and exercise training; 2) goal-setting presented by the Student Success Center; and 3) guidance for test anxiety was conducted by the office of Counseling, Disability Support, and Student Wellness. Student feedback from the test anxiety workshop was extremely positive with students stating: “I learned to face my anxiety and address the problem,” and “I learned three things that contribute to my test anxiety: expectations, negativity and lack of preparation.” As with any pilot, lessons were learned so future improvements could be made. The pilot demonstrated a need for more than one day per week of face-to-face contact; this change was implemented in fall 2016. One lesson learned was restructuring the Success for Calculus course solely around calculus topics and not going back to algebra and trigonometry topics and these changes were implemented in fall 2016.

The institution's resource allocation process ensures that its educational purposes are not adversely affected by elective resource allocations to other areas or disbursement of revenue to a superordinate entity.

5.A.2. Missouri S&T uses the Hyperion Planning System for system-wide planning, budgeting, and reporting. In addition, the Segregation of Duties policy governs appropriate protections for expenditures. University Procurement Supply Chain uses a variety of tools to monitor and control expenses. An annual spend analysis reports is created from our corporate card system to evaluate and manage appropriate usage. Data analytic tools are used to look for commonalities and opportunities to actively manage contracts and also to monitor usage compliance of existing contracts. Monthly reports are generated to highlight savings potentials and monitor spending habits.

University Advancement
Missouri S&T has a strong history of advancement. The campus is currently in its comprehensive campaign. The endowment is currently $190,154,152 which represents an increase of 35% since 2011. In FY2017, Missouri S&T received $14.7 million in charitable gifts and pledges resulting in a 38% increase from the prior fiscal year. University Advancement launched the Rolla Rising match campaign for flexible scholarships and seven endowments were secured. University Advancement received a “sustained fundraising excellence” award from the Council for the Advancement and Support of Education (CASE). A five year period of results was examined to determine the award.

Resource Allocation
The university allocates resources to ensure the university is supporting its mission. Examples of recent allocations: the Geothermal project and Havener promenade, $37.1M; Bertelsmeyer Hall, $24M; McNutt HVAC, $3.5M; Computer science, Engineering Research Lab, and Engineering Management HVAC, $2.6M; Gale Bullman and Student Recreation Center geothermal, $8.1M; Physics geothermal, $2.6M; Parker Hall, Norwood, and Harris HVAC, $5M; IDE and Nuclear, HVAC $350K; athletic field improvements, $2M; Schrenk Hall HVAC, $560K; residential housing, $30M; Kennedy Experimental Mine, $2.4M; Schrenk Hall phase two renovations, $18.1M; Norwood, testing center and graduate studies renovations, $4M; and Curtis Laws Wilson Library, $230K.

Allocation Collaboration
The vice chancellor for finance and operations held 10 budget open forums in spring 2017 for soliciting campus feedback on potential budget reductions. Those attending the forum provided feedback. Electronic
feedback was also collected. Feedback gathered from the open forums ultimately adjusted the budget. One example of a budget change resulting from feedback was changing the reduction percentage from the office of sponsored programs.

Property Allocation

The campus is vested in its alumni and this can be demonstrated through its commitment of $500,000 in initial funding; an additional $500,000 allocated at $100,000 per year for five years to a Hasselmann Alumni House maintenance endowment; and $35,000 per year for custodial and landscape assistance.

The campus-secured property at 605 W. 11th Street which engages students and alumni. The campus allocated $600,000 for purchase and renovation of this property to house diversity, outreach, and women’s programs. An additional $25,000 was allocated to create an innovation and collaboration space for the students.

Lab Allocation

The campus has developed a lab upgrade process which matches university funding with gifts. Departmental labs which have been upgraded through this process since 2014 include: 1) computer science, electrical and computer engineering, and business and information system technology, and information technology departments upgraded servers and added computer equipment for virtualization and big data usage; 2) physics upgraded equipment and software; 3) chemical engineering upgraded computers, data acquisition systems, state-of-the-art Emerson Delta V process control management hardware, and virtual software Mynah Mimic; 4) nuclear engineering added a liquid scintillation detector; 5) mechanical and aerospace engineering upgraded two laboratories, a dynamic systems and controls lab, and a gas turbine facility; 6) chemistry purchased new field flow fractionation equipment, and upgraded the nuclear magnetic resonance spectrometer; 7) geology and geophysics upgraded the high-pressure high-temperature rheometer and the active collaborative microscopy learning laboratory; 8) electrical and computer engineering added control systems equipment; 9) mining purchased a rock test system; 10) materials science and engineering upgraded the rolling mill and the Charpy impact system; and 11) civil, architectural, and environmental engineering upgraded three labs - the System and Process Assessment Research Lab which included a distributed optical fiber sensing system that is currently one of a few dozen units in the world; the Advanced Construction Materials Laboratory by upgrading specialized equipment at the Hypoint Research Park facility; and the Hydraulics Laboratory Enhancement Lab was upgraded with a steel experimental flume.

The goals incorporated into mission statements or elaborations of mission statements are realistic in light of the institution’s organization, resources, and opportunities.

5.A.3. The university mission integrates education, research and application to create and convey knowledge that serves our state and helps solve the world’s great challenges. Students work side by side with nationally renowned faculty who are focused on teaching, research, service and economic development. The mission was developed as a part of the comprehensive strategic planning initiative which began in summer 2012 and involved thousands of vested constituents including faculty, students, staff, administration, research partners and alumni.

Missouri S&T’s planning and budgeting are directly aligned to the university’s mission and strategic plan. These strategic goals were: 1) develop and inspire creative thinkers and leaders for lifelong success; 2) enhance reputation and raise visibility; 3) achieve sustainable growth to ensure best return on investment; and 4) increase and facilitate meaningful access to and interactions with renowned faculty, staff and services. One of the core strategies within the plan was allocating resources to additional faculty by 2020. By fall 2016, the campus had added 60 additional faculty. One of the primary goals for the 2018 strategic plan is to double the amount of annual research expenditures.

The institution’s staff in all areas are appropriately qualified and trained.
5. Missouri S&T supports our human resources through staff training and development. In addition to hosting monthly sessions to update and train support staff on topics of interest, training and development programs are offered such as the Supervisory Series for new and emerging supervisors, performance management training for both management and staff, and on-line sexual harassment prevention training (for both faculty and staff). An online system, myLearn, is available to all faculty and staff and covers a wide range of topics, including software application instruction, legal compliance awareness, and highly technical topics, but also includes topics for personal development.

In addition to training offered by Human Resources, S&T’s Office of Institutional Equity, Diversity, and Inclusion is also active in providing an array of training and activities such as Diversity and Inclusion at Missouri S&T and Mandated Reporter.

Collaborative efforts to maximize support for all employees are continually sought and provided when opportunities are present. For example, members of Human Resources were instrumental in the successful production of the 2017 Missouri S&T TEDx event. Human Resources members are also active in Staff Council, which hosts a variety of programs and events, and supports employee scholarships.

Human Resources also supports programs geared toward wellness and in recognition of employees’ need to align their work and personal lives, which can lead to retention and increased productivity. When feasible, employees may work with managers to develop a flexible work schedule and they can take advantage of the many wellness offerings. These are low cost, and even no cost options to sustain our human capital.

Department chairs continue to focus on faculty development. The untenured faculty mentoring process includes a teaching mentor team. This team arranges for classroom visits and provides feedback on classroom teaching as well as course structure and teaching methods.

The American Council on Education (ACE) provides a leadership program for new chief academic officers. This program provides professional development for the provost and the two college vice provost and deans.

The new supervisor training is a six month commitment for 90 minutes every two weeks. The format has online prep work prior to each session and bi-weekly discussion sessions. The series includes: Introduction to Management, Cross-Cultural Management Multipliers, myPerformance Overview, Performance Management, Recruiting, On-Boarding, Benefits, Payroll, Compensation Administration, Employee Motivation, Healthy Workplaces, Un-think Discussion, University Police, and Employment Laws.

The Chick Fil-A Leadercast is about changing the way the world thinks about leadership by building leaders worth following. It was a one-day event broadcast live from Atlanta and many faculty and staff participated in this developmental activity. Missouri S&T is an annual sponsor of the event in Southern Missouri.

University Advancement

The University Advancement division had 58% of its employees participate in professional development activities in FY15. The division further analyzed professional development and looked at motivation for employee retention and sustainability. The division completed a survey and discovered what makes employees feel valued and motivated. Since job satisfaction is unique for each employee, the areas staff would like to see implemented varied from tickets to football games, financial incentives, gym memberships, a relaxed dress code, clothing allowances, and flexible work schedules. Finding the source of motivation for each employee is a key aspect for professional development and retention.

The Education Advisory Board (EAB) included information about Missouri S&T University Advancement’s on-boarding and performance evaluation practices in one of their conference presentations as a best practice. The EAB was informed of the practice of junior level gift officers making joint visits with senior
development officers. The EAB presented this information as “Building Skills on the Road at Missouri University of Science and Technology.” During the pre-visit process, the gift officers review together the prospect or donors background, outline skills of the junior officer, determine the role of the junior gift officer during the meeting, and prepare for the visit. During the post-visit process, the gift officers debrief about donor reaction and visit outcomes, review progress on skill development, and outline the next steps for the donor and for the officers. This is a shared leadership process and helps expedite employee performance while developing collaborative relationships with multiple stakeholders.

Human resources, institutional equity and inclusion developed professional development series for academic administrators that includes eight ninety-minute modules. Module one, was designed for understanding faculty recruitment and strategies for developing a diverse team. Module two covered university finances and the budgeting process. Module three covers shared governance and strategies for leading by influence. Module four is dedicated to policies and procedures. Module five examines conflicts that faculty and administrators typically encounter and provides tips on how to work through those issues. Module six covers Title VII and Title IX and examines the academic administrator’s role in compliance. Module seven concentrates on leveraging university advancement and provides an introduction to fundraising, the basics of endowment, and working with alumni. Module eight highlights factors influencing student success and the activities that promote career preparation and professional development.

**The institution has a well-developed process in place for budgeting and for monitoring expense.**

5.A.5. In the hierarchy of University policies, the Collected Rules and Regulations is highest. It is a codification of policies formally approved by the Curators, and Guidelines and Executive Orders issued by the University President. The [UM Business Policy Manual](#) is an expansion of, or addition to, those policies dealing primarily with business and administrative policies.

The policies contained in this manual are applicable throughout the UM System. Campuses may choose to expand upon, or develop additional policies, or formally identify campus-specific procedures for their execution. Campuses may develop more restrictive policies, but may not exceed the authority contained in the Business Policy Manual. In case of any conflict among the Collected Rules and Regulations, the UM Business Policy Manual or campus manuals, the Collected Rules and Regulations shall be deemed controlling in all circumstances, with the UM Business Policy Manual taking precedence over campus manuals.
5- Core Component 5.B

The institution’s governance and administrative structures promote effective leadership and support collaborative processes that enable the institution to fulfill its mission.

1. The governing board is knowledgeable about the institution; it provides oversight of the institution's financial and academic policies and practices and meets its legal and fiduciary responsibilities.
2. The institution has and employs policies and procedures to engage its internal constituencies—including its governing board, administration, faculty, staff, and students—in the institution’s governance.
3. Administration, faculty, staff, and students are involved in setting academic requirements, policy, and processes through effective structures for contribution and collaborative effort.

The governing board is knowledgeable about the institution; it provides oversight of the institution’s financial and academic policies and practices and meets its legal and fiduciary responsibilities.

Governing Board
5.B.1. The University Of Missouri System Board Of Curators, consisting of nine members and one student representative, performs oversight of the four-campus system including Missouri S&T. This oversight of financial and academic policies occurs both through regular board meetings (six times a year) and through standing committees. The standing committees include the following: Executive Committee; Academic, Student and External Affairs; Audit; Compensation and Human Resources; Finance; Governance, Resources and Planning.

The Board of Curators Bylaws govern the activities of the Board. These bylaws are reviewed regularly and updated as necessary, with the most recent revisions approved in February 2013. Members of the Board of Curators are familiar with Missouri S&T. All new curators attend a full-day orientation on campus, where they meet the Chancellor and Chancellor’s staff, and complete a tour of the campus. One of the six meetings per year occurs on the Missouri S&T campus.

The University of Missouri System has policies that ensure that the public can review the activities and decisions of the Board of Curators. A meeting schedule of the Board of Curators is made public, and the meetings themselves are open to the public (excluding any closed executive sessions). In addition, the meeting minutes are also made available to the public, and the meetings themselves are available through live audio streaming.

Administration
The administration of Missouri S&T allows for effective management focused on furthering the university mission. The Chancellor’s executive staff includes: Provost and Executive Vice Chancellor, Chief Diversity Officer, Vice Chancellor for Finance and Operations, Vice Chancellor for Student Affairs, Vice Chancellor for University Advancement, Executive Director for Marketing and Communications and a Chief of Staff. The executive staff meets weekly.

The Provost and Executive Vice Chancellor’s staff includes: Vice Provost and Dean for the College of Arts, Sciences and Business, Vice Provost and Dean for the College of Engineering and Computing, Vice Provost and Dean for Enrollment Management, Vice Provost for Academic Support, Vice Provost for Global Learning, Vice Provost for Research, and Vice Provost for Graduate Studies.

In order to streamline operations, Missouri S&T went through a campus reorganization in summer 2017. The updated university Organizational chart.
The institution has and employs policies and procedures to engage its internal constituencies— including its governing board, administration, faculty, staff, and students—in the institution’s governance.

Faculty Senate

5.B.2. Faculty Senate is the legislative and policy-making body of the General Faculty. It carries out the functions and responsibilities assigned to it by the General Faculty and considers all matters referred to and by the Board of Curators, the President of the University of Missouri System, the Chancellor, and individual faculty members. The Faculty Senate, acting in accordance with the Rules and Regulations of the Board of Curators and the General Faculty, formulates, recommends and assists in the implementation of policies concerning the educational and research operations of the campus and other matters affecting the welfare of the campus, the faculty, and the students. Standing Committees include: Academic Freedom and Standards, Administrative Review Committee, Budgetary Affairs Committee, Committee for Effective Teaching, Curricula Committee, Discipline Specific Curricula Committee, Facilities Planning Committee, Honorary Degrees Committee, Information Technology/Computing Committee, Library and Learning Resources Committee, Personnel Committee, Public Occasions Committee, Rules, Procedures, and Agenda Committee, Student Affairs Committee, Student Awards and Financial Aid Committee, and Tenure Committee.

Staff Council

Missouri S&T Staff Council’s mission is to further the goals of the university by providing effective communication between staff and administration, represent and promote the best interests of the staff, and build a positive working relationship with the campus community in order to improve the campus environment for students, staff, and faculty.

Student Council

Missouri S&T Student Council focuses on three primary areas: develop leaders, serve the students, and represent the students. Student Council has numerous opportunities for student to enhance their leadership skills and provides services to students and organizations. The council listens to the opinions and concerns of the student body and acts on behalf of the students on an administrative level.

Council of Graduate Students

Missouri S&T’s Council of Graduate Students’ primary purpose is to advocate for graduate student interests within the university decision making committees concerning academic excellence, tuition and finance, and research. The council participates in open forums, Council of Graduate Students (CGS) meetings, and in events which help CGS better serve the entire graduate community. All graduate students are members of CGS and can serve as departmental representatives, assist with program development, apply for travel grants, attend workshops, and participate in the annual spring Graduate Research Showcase.

Administration, faculty, staff, and students are involved in setting academic requirements, policy, and processes through effective structures for contribution and collaborative effort.

Policy Process

5.B.3. There is a campus collaborative process for developing or changing campus policy. The policy is first introduced from a vice chancellor during a cabinet meeting. The policy is then vetted by the Chancellor’s Council. The council consists of: Student Council President, Council of Graduate Students’ President, Department Chairs Council President, Staff Council President, Faculty Senate President, Vice Provost and Deans, Dean of Students, Title IX coordinator, IT representative, physical facilities representative and a student diversity representative. Within a week of the council discussion, the proposed policy is published in eConnection for the campus community to review. Open listening sessions are scheduled within two weeks.
of publication. Feedback is gathered from the listening sessions and provided to the cabinet for adoption.

Campus Curriculum Committee

The Campus Curriculum Committee oversees the process for changes to the curriculum. Curricula forms are completed and submitted online. The electronic workflow automatically cycles to the correct persons for approvals. The Curriculum Management program provides direction to complete the following: Course Change (CC) Form - This form is for creating a new course or modification of a current course; Degree Change (DC) Form - This form is for creating or modifying degree programs, curriculum, emphasis areas, and minors; and Experimental Course (EC) Form - this form is for experimental courses 1001, 2001, 3001, 4001, 5001 and 6001; and Name Change (NC) Form - this form is for proposing a name change for a department.

Committee members include: representative from registrar, graduate council, faculty senate and additional faculty members.

The curriculum policy was approved at the June 2014 Faculty Senate meeting.

University Recruitment Committee

The mission of the committee is to make recommendations to the Chancellor on matters pertaining to student recruitment, admissions, financial aid, and other issues related to enrolling the desired student body at Missouri S&T. Committee membership includes: up to ten faculty representatives from the four academic focal areas: engineering, business, liberal arts and social science, and math and the natural sciences; Vice Provost for Academic Support, Vice Provost for Graduate Studies, Vice Provost for Global Learning, Director of Admissions, Registrar, Financial Aid Director, Diversity Programs representative, Directors of Communications and Marketing units, appointees from Residence Life, a student activities representative, and an International Affairs representative.

The committee identifies ways in which to actively involve faculty and staff in the student recruitment process. It also communicates with internal constituents the need for such connections and provide opportunities for faculty/staff to disseminate a common brand/marketing message regarding the quality and value of a Missouri S&T education. It contributes to the furtherance of university goals for achieving the appropriate mix of graduate and undergraduate students. It recommends graduate enrollment objectives to the Vice Provost for Research and Graduate Studies' Graduate Enrollment Plan and periodically reviews those objectives. It evaluates data on graduate student placement and makes recommendations to the Vice Provost and Dean for Graduate Studies on any other issues related to graduate enrollment the committee discovers.

Satisfactory Academic Progress Policy

In order to receive federal financial aid, students must be eligible to enroll in an academic program that leads to a degree or certificate program associated with a degree program and must make Satisfactory Academic Progress (per federal financial aid guidelines and Missouri S&T policy). Missouri S&T Satisfactory Academic Progress is defined by the following three criteria: 1) meeting a minimum cumulative grade point average requirement (GPA); 2) earning a minimum number of credit hours each semester (semester progress); and 3) completing the degree objective within a maximum number of attempted credits (maximum time allowance).

Missouri S&T maintains the following qualitative measure of the Satisfactory Academic Progress policy: undergraduate students with 59 or fewer credit hours must have a 1.67 cumulative GPA; undergraduate students with 60 credit hours or more must have a 2.00 cumulative GPA; at the end of the semester being evaluated students must have the cumulative GPA listed above. Quantitative Measure: Missouri S&T maintains the following quantitative measure of the Satisfactory Academic Progress (SAP) policy: Students must complete a minimum of 75% of attempted coursework. Undergraduate students who attempt at least 6 credit hours, and graduate students who attempt at least 4 credit hours during the semester, are expected to complete at least 1 credit hour during the semester. Students who have attempted these minimum hours and who do not complete at least 1 credit hour will be suspended from future aid. Maximum Time Frame: students must complete their degree program within 150 percent of the semester hours required for that degree. Calculations are performed on attempted hours, not completed hours. Each program requirement may
differ and students should review the course catalog [http://catalog.mst.edu/#text](http://catalog.mst.edu/#text) to determine the number of credit hours required for their degree. **Evaluation Periods:** to ensure that students are making sufficient progress both quantitatively and qualitatively, Missouri S&T SAP is evaluated at the end of each semester – fall, spring and summer.  
**Appeals:** Missouri S&T allows students to appeal a determination made by the institution that he or she is not making Satisfactory Academic Progress if they have extenuating circumstances such as extended illness of the student or an immediate family member (parent or sibling), enrollment limitations due to academic advisement or other extenuating circumstances outside of the student’s control.

**Student Success Committee**
The Student Success Committee serves as an advisory committee appointed by the Chancellor to address key issues related to improving student retention and student academic success. The committee is charged with making a thorough study of attrition, recommending steps to increase retention, and implementing approved specific steps that enhance retention of students. The committee completes an annual report each year.
5. - Core Component 5.C

The institution engages in systematic and integrated planning.

1. The institution allocates its resources in alignment with its mission and priorities.
2. The institution links its processes for assessment of student learning, evaluation of operations, planning, and budgeting.
3. The planning process encompasses the institution as a whole and considers the perspectives of internal and external constituent groups.
4. The institution plans on the basis of a sound understanding of its current capacity. Institutional plans anticipate the possible impact of fluctuations in the institution's sources of revenue, such as enrollment, the economy, and state support.
5. Institutional planning anticipates emerging factors, such as technology, demographic shifts, and globalization.

The institution allocates its resources in alignment with its mission and priorities

5.C.1. Resource allocation is a collaborative effort designed to further the mission of the university. Budget priorities include: $15,577,457 dedicated to instruction, $9,133,075 for research, $1,191,272 for public service, $3,843,913 for academic support, $7,313,899 for student services, $2,088,720 for instructional support, $9,200,758 for operations and maintenance of plant facilities, and $8,087,000 for scholarships. The complete budget is outlined here.

Strategic Plan

The 2012-2018 campus strategic plan was created around four primary goals: 1) develop and inspire creative thinkers and leaders for lifelong success; 2) enhance reputation and raise visibility; 3) achieve sustainable growth to ensure best return on investment; and 4) increase and facilitate meaningful access to and interactions with renowned faculty, staff and services. The budget was prioritized to make progress on its goals.

The institution links its processes for assessment of student learning, evaluation of operations, planning, and budgeting.

5.C.2. All students at Missouri S&T are required to participate in appropriate assessment activities. The requirement to assess students originates from a directive of the Governor and General Assembly of the State of Missouri. Missouri S&T is accountable to the state, and we are expected to demonstrate student learning outcomes and prove that state funds are being spent appropriately and learning objectives are realized. The general education program is designed to help students acquire sufficient general knowledge and intellectual versatility to enable them to become informed and resourceful members of society. Consistent with the university’s mission and values, the following seven general education learning goals define skills and knowledge that students are expected to develop: an ability to communicate effectively both orally and in writing; an ability to think critically and analyze effectively; an ability to apply disciplinary knowledge and skills in solving critical problems; an ability to function in diverse learning and working environments; an understanding of professional and ethical responsibilities; an awareness of national and global contemporary issues; and a recognition of the need for, and an ability to engage in life-long learning. Student learning outcomes are assessed at the course, program, and institutional levels. Participation in the assessment activities ensures continual improvement and a quality education for current and future generations of students.
Changes in assessment requirements can affect enrolled students immediately as they are not linked to the catalog year and may change during a student's undergraduate career.

**Linkage**

Assessment and budgeting priorities are inherently linked and historically have been driven by the academic departments. The faculty and department chairs analyze student outcomes and are the logical process flow for starting a budget request. One example of this linkage, is the chemistry lecture redesign. Student outcomes were not at the acceptable level for the department therefore the department reached out for additional funding to enhance the course and ultimately student learning. The department added new technology in the classroom, additional graduate students, and online capabilities. Another example to demonstrate the linkage is through hiring a faculty qualified for teaching a new course. The new industrial/organizational psychology program needed a faculty member with specific qualifications in order to positively impact student learning. A new faculty line was approved and funding was allocated. Lab renovations, additional technology in the classroom, and faculty hires are all examples of this inherent linkage of student learning assessment and budget priorities.

**National Survey of Student Engagement (NSSE)**

National Survey of Student Engagement survey was performed in 2016. There were 576 first-year students, a 45% response rate, and 812 seniors, a 42% response rate. Seniors believed Missouri S&T contributed to knowledge, skills, and personal development. Survey results indicated that 87% felt their critical thinking and analytically skills were enhanced. Satisfaction with Missouri S&T among first-year students was 90%, exceeding the peer average of 85%. Satisfaction with seniors was 85%, exceeding the peer average of 80%. The percentage of students that “definitely” or “probably” would attend this institution also exceeded peer averages. However, only 32% felt they were more of an informed citizen having attended Missouri S&T. One way to enhance the student as an informed citizen is through a new residential experience program. Our residential experience focuses on helping students discover more about themselves, as well as their impact on their community. Living in a residence hall, students learn how to develop a better self-awareness, communicate across differences, and engage in their community. Members of learning communities share common interests and goals, and constantly explore their academic and social interests. Missouri S&T offers a variety of learning communities with the possibility of more in the future. One learning community explores the world through the Global Connections Community. This community is designed to develop intercultural awareness and leadership skills. There is discussion on current events and international perspectives, exploration of local cultural events and festivals, and discovery of a variety of campus, community, and global resources.

The planning process encompasses the institution as a whole and considers the perspectives of internal and external constituent groups.

**Board of Trustees**

The Missouri University of Science and Technology Board of Trustees is comprised of Missouri S&T alumni and friends whose accomplishments, experiences, and interests help guide the future of Missouri S&T. The Board has a three part mission of: 1) Consultancy: to counsel and advise the Chancellor on means to enhance the stature of the university; 2) Ambassadorship: to interpret the university's goals and programs to its various constituents. To promote the participation of alumni and friends in building and advancing the public image of Missouri S&T; and 3) Sponsorship: to advance the objectives of the development program by identifying and securing financial support for the university.

The Executive Committee of the Missouri S&T Board of Trustees consists of the President, Vice President, the Missouri S&T Chancellor, and the Vice Chancellor for University Advancement. The Executive
Committee represents and acts for the membership between meetings on various matters and serves as the nominating committee that brings forth names for membership of the Board.

Engineering Advisory Board
The purpose of the Engineering Advisory Board (EAB) is to balance the internal input that the Provost and the Vice Provost and Deans receive from department chairs, faculty, other vice provosts, and other internal and external friends of the University, with the perspectives of professionals from the Missouri and national engineering communities who have a keen interest in our endeavors and a vested interest in the results. The EAB keeps the University informed about the educational, professional, and research needs of the engineering profession.

Corporate Development Council
Representatives from S&T’s top corporate partners are invited to participate in the S&T’s Corporate Development Council (CDC). CDC is led by a team of corporate and university officials and meets on campus twice a year. In conjunction with meetings, CDC sponsors student development events such as the Student Leadership Banquet and Student Etiquette Dinner. Other activities sponsored throughout the year include: speaking to classes, participating in mini-career fairs, student leadership conference, and various student recruiting events. CDC members serve as a point of contact for their company and help facilitate linkages between their company and the university.

Corporate Advisory Board
The Corporate Advisory Board is hand selected by the corporate relations office. It supports and advises the Corporate Relations Team at Missouri S&T in accomplishing its strategic plan goals and objectives, provides guidance on industry needs and challenges, and helps connect Missouri S&T with industries and companies for mutual benefit. The Corporate Advisory Board members have made great strides in their field of work and their inputs will broaden the spectrum of corporate relationships at Missouri S&T.

Academies
Many academic departments work with alumni and business partners to assist the department. An Academy provides consultancy to the chair, faculty, and students. It provides professional examples to students to help strengthen dedication to their field. It also provides sponsorship by identifying, securing, and providing financial support for the program.

Institutional planning anticipates the possible impact of fluctuations in the institution's sources of revenue, such as enrollment, the economy, and state support.

The institution plans on the basis of a sound understanding of its current capacity. Institutional plans anticipate the possible impact of fluctuations in the institution's sources of revenue, such as enrollment, the economy, and state support.

The campus sets aside $1 million as an enrollment contingency fund within the budget. If the campus does not meet its expected enrollment targets, those funds can be utilized to balance the deficit.

The University of Missouri System is undergoing a work analytics project for all non-academic departments to yield efficiencies and a program prioritization effort for academic departments.

The university underwent a space audit in 2014. This study was used as a guide for the development of the Campus Master Plan.

Institutional planning anticipates emerging factors, such as technology, demographic shifts, and globalization.
5.C.4. Missouri S&T follows a well-constructed strategic plan that was created by a variety of campus committees who considered the current situation at Missouri S&T and looked at future projections from a variety of sources including data from the US Census Bureau, US Department of Labor, Western Undergraduate Exchange demographic forecasts, and data from the College Board, among others. This data is reviewed annually to keep projections up to date and to plan accordingly. With this data, Missouri S&T has been able to meet and exceed enrollment numbers that are set in the strategic plan by developing, in 2013, a specific long term undergraduate recruitment strategic plan. In addition, Missouri S&T Enrollment Management creates a biannual undergraduate recruiting plan outlining activities and efforts for a given year. The plan includes regions where we recruit and specific actions to take to grow enrollments in smaller majors.

Demographic Shifts

The “supply” of new high school graduates in Missouri has stopped shrinking, and is on a very gradual growth trend. That growth is in a fairly new demographic group in Missouri: Hispanic students. This growth is particularly pronounced in western and southwestern Missouri, including the Kansas City and Springfield areas. Missouri S&T has hired a regional recruiter in the Kansas City area and the university has increased recruiting efforts in both regions of the state. S&T is also focused on making sure that we maintain appropriate programming for students from diverse backgrounds.

The number of students interested in mechanical engineering is peaking and beginning to decline nationally. While it is still the largest interest group in engineering, Missouri S&T is already working to strengthen enrollment in non-engineering areas with particular emphasis on growing enrollment in business, psychology, and biological sciences (including pre-professional medical programs) where student interest is strong and growing.

In order to strengthen our national reputation and maintain or grow our enrollment, Missouri S&T has also increased efforts in recruiting out of state students:

- California – Missouri S&T moved a regional recruiter from Tennessee to California to respond to the larger number of high school students in CA and their greater likelihood to relocate for college
- Chicago – maintained a regional recruiter in Chicago and increased budget and recruiting efforts in that area
- Texas – maintained a full time representative based in Dallas. Increased budget and efforts in TX;
- Increased presence and efforts in Denver, CO; Minneapolis/St.Paul, MN; and Phoenix, AZ in response to promising markets in those areas
- Increased prospecting and buying of prospective student names nationwide for Missouri S&T majors in national demand – primarily engineering and science majors

Transfers

Missouri S&T is maintaining several articulation agreements with two year institutions with large underrepresented minority populations. These include the St Louis Community College System, the Metropolitan Community Colleges in Kansas City, Ozarks Technical College in southwestern Missouri, as well as Mission College in California and Richland College in Dallas, TX.

Graduate Trends

Due to the demographic shift and the anticipation of lower international students applying and being admitted to S&T, the Office of Graduate Studies has significantly increased domestic recruiting. In Fall 2017 semester, graduate recruiters attended 25+ domestic graduate fairs and visited 25+ domestic schools to distribute information and make connections with faculty/students/career center staff (up from Fall 2016 with ~30 schools reached for either fairs or visits, and Fall 2015 with ~20 fairs or visits). Additionally, to increase underrepresented minorities and women to enroll at Missouri S&T, the Office of Graduate Studies hosted a GEM GRAD Lab, which brought approximately 75 underrepresented minority STEM students from across
the region to the Missouri S&T campus to learn about why they should attend graduate school, funding opportunities, and more. This was be a prime opportunity to showcase the S&T campus and its state-of-the-art research facilities.

Of the 25+ fairs and 25+ schools mentioned above, 10+ of them were Historically Black Colleges and Universities, plus recruiters attended the Society of Women Engineers and Society of Hispanic Professional Engineers convention fairs and the National Society of Black Engineers (NSBE) convention fair.

Globalization
International affairs has worked in the following ways to continue to develop new markets and address issues in globalization, demographic shifts, and technological opportunities.

- Increased representation of global recruitment agencies from three agencies in fall 2016 to fifteen by end of summer 2017
- Developed new MOU agreements with institutions in Turkey, Iraq, and Ecuador to provide educational opportunities and increase awareness of S&T’s brand globally
- Developing institutional agreement with GUST University in Kuwait to provide educational opportunities to their students
- Ongoing recruitment efforts in India and China to support and maintain enrollment numbers
- Exploring new and upcoming international markets in Indonesia, Vietnam, and Thailand to diversify our international population
- Partnering with Global Learning’s Educational Technology department to provide distance learning opportunities to developing markets
- The Global Relations Officer is responsible for reaching US-based international students in domestic venues
5.D. – Core Component 5.D.

1. The institution develops and documents evidence of performance in its operations.
2. The institution learns from its operational experience and applies that learning to improve its institutional effectiveness, capabilities, and sustainability, overall and in its component parts.

The institution develops and documents evidence of performance in its operations.

State Performance Measures

5.D.1. Missouri S&T is dedicated to continual improvement and evaluation of its performance. The state has identified six performance measures. As part of the University of Missouri System, Missouri S&T tracks data related to state performance funding measures (six-year graduation rate, first-year retention rate, pass rate on licensing exams, federally funded research, proportion of operating expenses on core educational outcomes and student outcome placement rates) and accountability measures (headcount enrollment, FTE enrollment, student diversity, total degrees awarded, and development of annual fundraising).

Freshman to Sophomore Retention Rate: The University of Missouri System met its target through sustained excellence. The Fall 2009 - Fall 2011 rate of 82.5% decreased to 82.1% in Fall 2010 - Fall 2012 but is above the benchmark rate of 82.0%. In 2012, Missouri S&T had an 83% freshman to sophomore retention rate.

Six-Year (150 percent Time) Cohort Graduation Rates: The University of Missouri System met its target through improved performance and sustained excellence. The Fall 2004 - Fall 2006 rate of 64.5% increased to 64.8% in Fall 2005 - Fall 2007, which exceeded the sustained excellence rate of 57.6%. Missouri S&T six-year graduation rates were 65% in 2012.

Improvements on Professional/Occupational Licensure Tests: The University of Missouri System met its target through sustained excellence. The FY10-FY12 rate of 95.6% decreased to 95.2% in FY12-FY14 but exceeds the benchmark rate of 90.0%.

Percent of Total Education and General Expenditures Expended on the Core Mission: The University of Missouri System met its target through sustained excellence. The FY10-FY12 rate of 76.2 percent decreased to 75.5% in FY11-FY13 but exceeded the benchmark rate of 70.4%. Missouri S&T averages between 70% of expenditures expended on core mission.

Business and Industry Sponsored R&D Expenditures for Science and Engineering in $1,000s: The University of Missouri System met its target through improved performance. The total expenditures increased from $10,234 in FY09-FY11 to $11,102 in FY10-FY12.

Graduate Outcomes: Job placement of Bachelor degree recipient in job appropriate at degree level. Missouri S&T averages 80% for the percentage of graduates with plans six months post-graduation.

Academic Productivity Measures

In programs where the highest degree offered is doctoral, the following productivity measures have been identified: Ph.D. enrollment per tenured, tenure-track faculty; number of publications per tenured, tenure-track faculty; and research expenditures per tenured-tenure-track faculty. In programs where the highest degree offered is a masters or bachelors the following metrics have been identified: student credit hours per tenured, tenure-track faculty; degrees awarded per tenured, tenure-track faculty; and the number of publications per tenured, tenure-track.

Delaware Study

Missouri S&T utilizes the Delaware Study as a benchmarking tool for academic departmental budget
decisions. This information allows for academic deans to perform analysis on comparator budgets per student credit hour. The organized course sections from the study also provide information on the faculty workload and supplemental instruction.

**The institution learns from its operational experience and applies that learning to improve its institutional effectiveness, capabilities, and sustainability, overall and in its component parts.**

5.D.2. The Operational Excellence Initiative (OED) is a system-wide project designed to allow the university to achieve operating efficiencies and effectiveness, focusing, for example, on avoiding duplication of administrative tasks and improving user satisfaction. One popular project involved a major overhaul of our travel and expense reimbursement system. Upon completion, this project resulted in significantly faster reimbursements, improved data for college-level decision making, and saved an estimated $1.3 million across the four campuses.

**The Center for Sustainability**

Missouri S&T's Center for Sustainability develops, leads and promotes campus sustainability initiatives. The center manages the Solar Village, EcoVillage and the Microgrid as research and outreach assets for the university. These areas provide an ideal setting for faculty and student research in sustainable design and technologies, as well as behavioral studies. It is a perfect setting for corporate and government partnerships to demonstrate, research, and test new energy and environmental technologies. The Center for Sustainability also leads outreach activities through coordination of conferences and workshops; develops campus and community outreach programs; and engages current and future corporate, government, and community partners in center activities.

**Geothermal**

One of the largest sustainability initiatives on campus was the sustainable energy geothermal project. This project provides heating and cooling to 17 buildings on campus and was originally projected to cut energy usage by 50 percent, reduce carbon dioxide emissions by 25,000 tons per year, and decrease water usage by 10,000,000 gallons per year. The BTU usage was actually reduced by six percent during the system’s first year, representing an energy cost savings of $1.2 million. Water usage decreased by 17,730,000 gallons in the first year of operation, representing a 40% decrease. The carbon dioxide emissions goal was also achieved.

**Campus Sustainability Efforts**

The Havener Center has a plan to reduce food waste. The process involves pre/post-consumer waste for use among local farmers.

There are a variety of sustainable energy programs on campus, including campus facility housing, hydrogen fueling, electric vehicle (EV) equipment, EV charging, renewable architecture and renewable generation. The E3 Commons consists of a hydrogen fueling station which can produce clean, renewable energy; a hydrogen garage; and a renewable energy transit depot.

The Solar Village is a series of four U.S. Department of Energy Solar Decathlon homes the students have built throughout the years of competition. These four homes reside within a city block and are all grid-connected. A supplement to the Solar Village is the EcoVillage which houses the 2013, 2015 and 2016 homes. Missouri S&T is the only university that has earned an opportunity to compete in seven of the eight competitions.

**Strategic Sustainability Planning Committee**

The Strategic Sustainability Planning Committee is responsible for ensuring adherence to the goals set forth in the Missouri S&T Sustainability Policy. Strategic Sustainability Planning Committee Champions will establish and lead working groups and are responsible for setting, reporting upon, and meeting objectives aligned with the Campus Sustainability Policy. The committee is comprised of faculty, staff, and students dedicated to promoting and guiding sustainability efforts on campus.
Health Services

The acute care clinic continues to exceed national standards for same-size universities with appointments exceeding 6,000 annually. A fully-implemented electronic records system and patient portal have streamlined the documentation and care process. Health services is seeking ambulatory care accreditation and recently joined Global TravEpiNet, a national consortium of U.S. travel clinics delivering enhanced medical services. A new Student Health Governing Body was created for student collaboration.

Math Assessment

During the student’s registration and orientation session, students are given the Missouri Mathematics Placement Test and trigonometry exam to determine their math classes. These two in-person exams take 90 minutes to complete. A task force was developed to analyze the feasibility of an online math assessment. The task force recommended creating an equivalency table with the ACT math score and corresponding math class. After fall 2017 data compilation, the equivalency table may be considered for use in 2018 to pre-assign the student’s math class.

Campus Structure

In 2014, the campus reinstituted the academic dean structure by establishing the two new colleges: the College of Arts, Sciences, and Business and the College of Engineering and Computing. Associate deans were also added to each college. One associate dean is responsible for research initiatives and proposals; research conduct and safety; manages all external relations and engages donors, faculty, and students. The other associate dean oversees curriculum and instruction; development and implementation of strategic planning related to academic programs; faculty recruitment and professional development; and coordinates academic program review with department chairs. Executive directors of development, web user interface/user experience designers and communication liaisons were also hired.

Additionally in 2015, the accounting and budget offices were merged to create fiscal services (accounting, budget, cashier’s office, student loan collections and campus business management). Human Resources, Affirmative action, diversity and inclusion was reorganized and renamed Human Resources, Equity and Inclusion. The first director of institutional, equity, diversity and inclusion and Deputy Title IX Coordinator was hired and retitled to Chief Diversity Officer in 2017.

Scholarship Process

In 2013, the percentage of spendable carry forward balances were high and donors became concerned their gifts were not being spent appropriately. A task force was created in 2014 to review the scholarship process. A review revealed that no single person was listed as the owner of the process, student financial aid reviewed fiscal limits once per year, and departmental scholarships were handled through a paper process. A revision of the scholarship process occurred. All academic scholarships were placed into an electronic system, the scholarship manager owns the process, a Scholarship Advisory Board was developed, a recommended five percent carry forward balance was implemented, and a monthly review of finance reports by the scholarship manager was also implemented. This new process offset general revenue by $2 million.
5.S • Criterion 5 • Summary

The institution's resources, structures, and processes are sufficient to fulfill its mission, improve the quality of its educational offerings, and respond to future challenges and opportunities. The institution plans for the future.

Summary

Finance and operations operates with a guiding code of ethics which demonstrates Missouri S&T’s fiduciary approach. These guiding ethics are: 1) perform duties in accordance with the highest ethical and legal standards; 2) practice honesty and integrity in all aspects of work; 3) exhibit professionalism in the workplace, and conduct in a way that will continue to promote the public's confidence in the integrity of the University; 4) be fair-minded, non-discriminatory, and treat all individuals, both internal and external to the University community equitably, with civility, respect and dignity; 5) fulfill assigned responsibilities, and be proactive in developing the skills necessary to provide high job performance; 6) exercise fiduciary responsibility with respect to safeguarding the University's assets; 7) exercise custodial responsibility with respect to the use of University property and resources; 8) exercise confidentiality with respect to information, records, and data management, respecting the rights and privacy of individuals; 9) take action to mitigate any real or perceived conflicts of interest; and 10) continually demonstrate that environmental management is among the highest priority and environmental responsibility is accepted as an integral part of operations. It is this ethical approach that allows the university to adapt to changes in resources, evaluate processes for efficiencies, develop long-term planning objectives and ensure educational offerings are funded.