

Report of the Task Force on College Reorganization
College of Science and Engineering
November 28, 2023

Task Force Organization

Chair – Dr. Barrett Bryant, Dean

Organizing Chair – Dr. Beth Wuest, Associate Vice President for Institutional Effectiveness

Eight (8) members, one each from:

Biology - Dr. Clay Green, Professor

Chemistry & Biochemistry - Dr. Todd Hudnall, Professor

Computer Science - Dr. Apan Qasem, Associate Professor

Engineering - Dr. Jesus Jimenez, Director

Engineering Technology - Dr. James Wilde, Chair

Mathematics - Dr. Susan Morey, Chair

Physics - Dr. Edwin Piner, Chair

MSEC - Dr. Sean Kerwin, Director - Chemistry and Biochemistry

One (1) member named by Faculty Senate (faculty member in CoSE) - Dr. David Donnelly, Professor - Physics

One (1) member named by Staff Council (staff member in CoSE) - Kim Dunbar, Administrative Asst III — Mathematics

Advising Representative – Brooke Heithoff Tuttle, Director of CoSE Academic Advising

Background

The College of Science and Engineering (CoSE) is presently organized with 6 departments (Biology, Chemistry and Biochemistry, Computer Science, Engineering Technology, Mathematics, and Physics), and the Ingram School of Engineering. CoSE also houses the Edwards Aquifer Research and Data Center (EARDC) and an interdisciplinary Ph. D. program in materials science, engineering and commercialization (MSEC). The current organization of CoSE is summarized in the chart in Figure 1. With 7,338 students as of Fall 2023, CoSE is the largest college at Texas State University. An overview of the departments, school and MSEC program, as of Fall 2023, is given in Table 1. Note that MSEC faculty belong to other departments and the funding these faculty receive are mostly associated with those departments.

The guiding questions the Task Force was charged with answering are listed below along with the recommended answers to these questions. Each department/school representative surveyed their faculty as a group and the college did a survey of the entire faculty and staff regarding these questions. The answers to the questions were then arrived at by consensus of the committee members using the faculty and staff input to the surveys.

Figure 1: College of Science and Engineering Organizational Chart (Current)

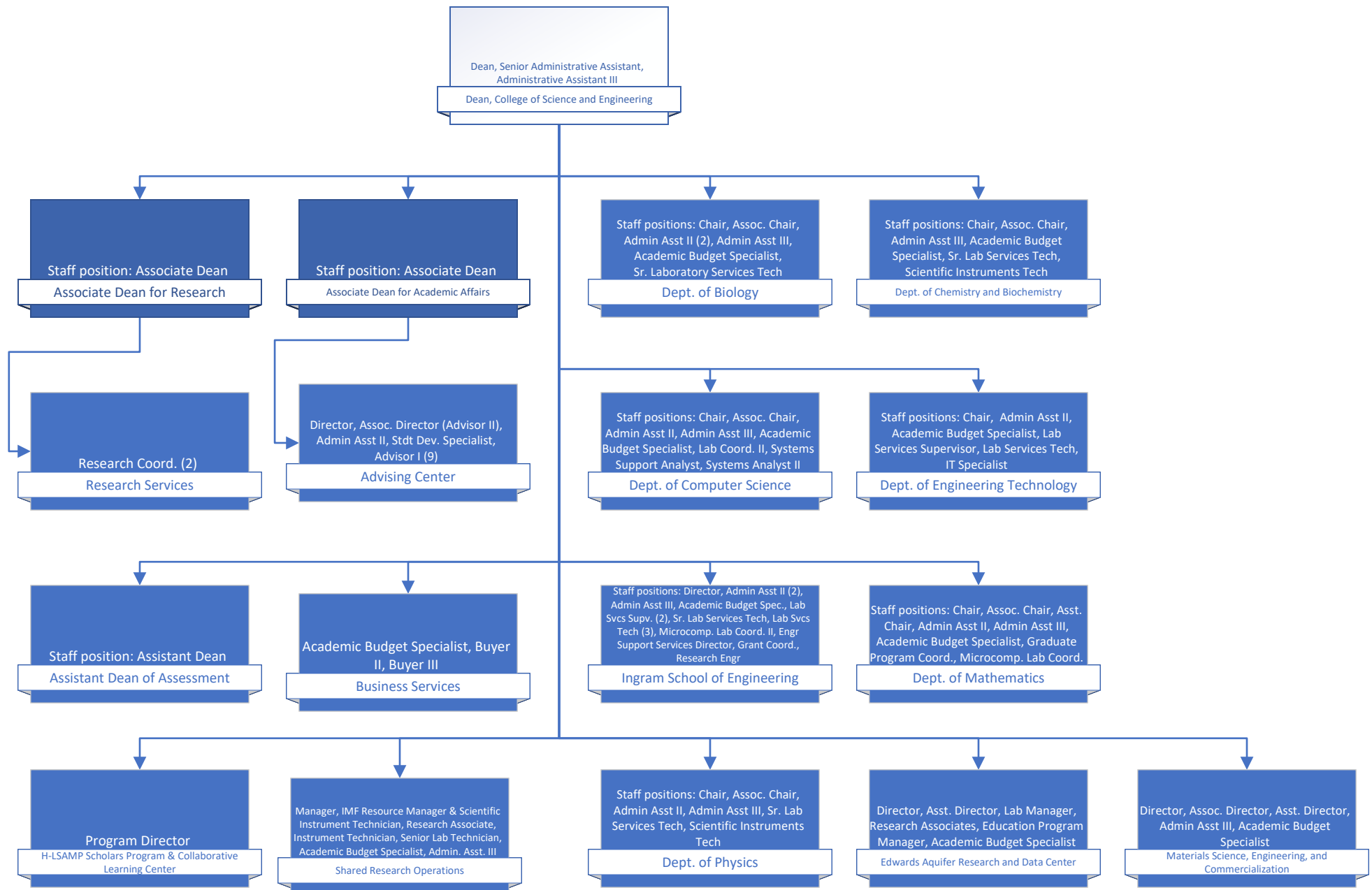


Table 1: Overview of College of Science and Engineering in Fall 2023

	Tenure Line Faculty	Non- Tenure Line Faculty	Undergraduate Majors	Graduate Majors	Semester Credit Hour Production	Research Expenditures – FY 2023
Biology	33	23	1,902	134	28,310	\$4,752,793
Chemistry & Biochemistry	19	18	384	31	14,457	\$2,680,209
Computer Science	22	7	1,770	247	11,923	\$1,690,702
Engineering Technology	15	13	916	58	5,414	\$820,473
Ingram School of Engineering	31	23	1,392	83	7,879	\$3,239,743
Mathematics	41	47	189	50	39,684	\$1,619,162
MSEC				70	621	\$37,896
Physics	12	14	86	26	9,862	\$1,264,893
Total	173	145	6,639	699	118,150	\$16,105,871

College Reorganization Guiding Questions

- Is CoSE organized in a way that its degree programs/academic units can optimally meet university goals?

As currently organized, CoSE cannot optimally meet university goals. The Ingram School of Engineering has already grown to the point where it should be reorganized into departments representing the main engineering disciplines. This would streamline the degree programs and establish both faculty and student identity in a more focused discipline, thereby supporting university goals 1 (supporting student success) and 4 (enriching community, collaboration, and partnerships). CoSE expects existing programs in Engineering, Computer Science, Construction, Construction Management, and Engineering Management to grow, along with new Ph. D. programs in Civil Engineering, Construction Management, Electrical Engineering, Engineering Management, Mathematics, Mechanical Engineering, and Molecular and Biophysical Chemistry, and the possible addition of the Department of Agricultural Sciences. This growth will eventually require a separation into two more manageably sized colleges.

CoSE has many current resource needs, which any reorganization will also require, including staff for marketing and communication, undergraduate and graduate student recruiting, and undergraduate and graduate student advising, which could be addressed in phases during the creation of two new colleges. Addressing these will facilitate goal 5 (developing

infrastructure and resources), thereby leading to achievements of goals 2 (advancing academic excellence) and 3 (expanding discovery, innovation, creativity, and research).

- What colleges, if any, would provide each of the degree programs/academic units the best opportunity for growth and to most effectively meet university goals?

The Task Force identified the following advantages and disadvantages of keeping CoSE intact.

Advantages

There is considerable synergy and cooperation across multiple departments, including the interdisciplinary Ph. D. degree in Materials Science, Engineering and Commercialization (MSEC), which currently spans multiple disciplines within the college.

CoSE currently has strong science and mathematics programs with rapidly developing engineering programs, including computer science and engineering management. If the engineering programs were to become a separate college, it would be important to preserve the strength of the science and mathematics programs.

Disadvantages

CoSE has a number of current resource needs, staff for marketing and communication, undergraduate and graduate student recruiting, and undergraduate and graduate student advising, which could be addressed in a reorganization. Presently many tenure line faculty are involved in administrative and technical matters that would be better done by staff.

For universities the size of Texas State University and expected stature as a Carnegie Research 1 university, it is unusual to not have a standalone College of Engineering. Most faculty in the Ingram School of Engineering identify more with a College of Engineering than with a College of Science and Engineering. Furthermore, a College of Engineering would raise the prestige of Texas State for both prospective faculty and students.

The size and fast-growing nature of CoSE makes management of the college more multi-faceted. This could become more streamlined in two smaller colleges.

Considering the above advantages and disadvantages, and the survey of the faculty and staff of the various CoSE units, the Task Force recommends an eventual creation of two separate colleges, the College of Science and Mathematics (CoSM) and the Ingram College of Engineering and Computer Science (ICECS). CoSM would house the current departments of Biology, Chemistry and Biochemistry, Mathematics and Physics, with the future planned addition of Agricultural Sciences. ICECS would house the current departments of Computer Science and Engineering Technology, each reorganized as detailed later, in addition to four new engineering departments (Civil and Environmental Engineering, Electrical and

Computer Engineering, Industrial and Manufacturing Engineering, and Mechanical Engineering). The interdisciplinary Ph. D. degree in MSEC, which currently spans disciplines that would be in the two different colleges, will remain part of the two colleges jointly.

- Are there better alignments – culturally, academically, and research – that would serve our faculty and students in better ways, that would provide career and growth opportunities for faculty and students? In other words, are there other structures more fitting for the degree programs/academic units in CoSE?

As stated earlier, almost all Carnegie Research 1 universities have a College of Engineering, typically including Computer Science, and often named Engineering and Computer Science to recognize the slight differences in the fields and high percentage of faculty and students that computer science often occupies. Our view is that Computer Science at Texas State is large enough to be a School within the Ingram College of Engineering and Computer Science and Texas State University Advancement believes that there would be potential naming opportunities for the school from prospective donors.

It is also the case that there are potential naming opportunities with prospective donors for a School of Construction, which is now part of the Department of Engineering Technology. Although Engineering Technology is currently small, it is believed that there will be considerable growth in the M. S. and Ph. D. programs in Engineering Management. It is also expected that construction programs will experience significant growth, including in the M.S. and Ph. D. programs in Construction Management. Hence, the Task Force recommends that the current Department of Engineering Technology be split into a School of Construction and Department of Engineering Technology and Management.

It has already been stated that the programs within the existing Ingram School of Engineering be divided into four departments. Three of the four departments (Civil and Environmental Engineering, Electrical and Computer Engineering, and Mechanical Engineering) have proposed Ph. D. programs and plan to propose corresponding M. S. programs and the other (Industrial and Manufacturing Engineering) plans to proposed M. S. degrees in each of Industrial Engineering and Manufacturing Engineering. Having departments corresponding to degree programs will allow better focus in each discipline. Currently there is a single M. S. in Engineering with 5 concentrations and enrollment is low, compared to what would be expected in discipline-specific M. S. degrees.

The Task Force recommends rebranding the former College of Science as the College of Science and Mathematics, to both recognize that Mathematics is separate from Science but also due to the large size of the Department of Mathematics and its many concentration areas. The department will continue to increase in size with the proposed new Ph. D. in Mathematics and growth in Engineering requiring extensive teaching of math courses. For this reason, the Task Force recommends rebranding the Department of Mathematics as the School of Mathematics.

- Are there brand and reputation building opportunities – innovation, cutting edge – by moving degree programs/academic units?

The brand and reputation building opportunities come from the creation of new units and renaming of existing units suggested in the previous section, summarized below.

- College of Science and Mathematics
 - School of Mathematics
- Ingram College of Engineering and Computer Science
 - Department of Civil and Environmental Engineering
 - School of Construction
 - School of Computer Science
 - Department of Electrical and Computer Engineering
 - Department of Engineering Technology and Management
 - Department of Industrial and Manufacturing Engineering
 - Department of Mechanical Engineering

There is an immediate prospect for naming the Schools of Construction and Computer Science, and a longer-term goal of naming the School of Mathematics. Both future colleges would plan to seek naming opportunities for all departments as well.

Reorganization Plan

If the reorganization were to be in place now (i.e., using Fall 2023 data), Tables 2 and 3 would summarize the status of each.

Table 2: Overview of Future College of Science and Mathematics

	Tenure Line Faculty	Non- Tenure Line Faculty	Undergraduate Majors	Graduate Majors	Semester Credit Hour Production	Research Expenditures – FY 2023
Agricultural Sciences	12	8	782	29	5984	\$1,638,903
Biology	33	23	1,902	134	28,310	\$4,752,793
Chemistry & Biochemistry	19	18	384	31	14,457	\$2,680,209
Mathematics	41	47	189	50	39,684	\$1,619,162
Physics	12	14	86	26	9,862	\$1,264,893
Total	117	110	3,343	270	98,297	\$11,955,960

Table 3: Overview of Future Ingram College of Engineering and Computer Science

	Tenure Line Faculty	Non- Tenure Line Faculty	Undergraduate Majors	Graduate Majors	Semester Credit Hour Production	Research Expenditures – FY 2023
Civil and Environmental Engineering	10	5	344	24	1,992	\$1,537,510
Construction	9	9	680	35	3,846	\$578,960
Computer Science	22	7	1,770	247	11,923	\$1,690,702
Electrical and Computer Engineering	8	6	422	30	2,412	\$1,207,278
Engineering Technology and Management	7	6	248	22	1,568	\$241,512
Industrial and Manufacturing Engineering	9	9	217	11	2,668	\$466,348
Mechanical Engineering	4	3	421	21	735	\$28,607
Total	69	45	4,102	304	25,144	\$5,750,917

At present, due to the maturity of the departments, CoSM has a higher amount of grant funding per tenure line faculty. For example, Mechanical Engineering is only 2 years old and Civil and Environmental Engineering only 4 years old. Our expectation is that with the development of ICECS, research expenditures will significantly rise. CoSM also has a higher amount of semester credit hours produced due to many service courses being taught by the Departments of Biology, Chemistry and Biochemistry, Mathematics and Physics. Several new M.S. programs in engineering are planned to increase semester credit hour production at the M. S. level and the enrollments in both colleges will benefit from the hiring of undergraduate and graduate recruiters.

The proposed timeline for the evolution of CoSE into CoSM and ICECS is below.

2024-2025

- Establish new engineering departments, using ISoE administrative staff as needed for the staff needs of the new departments and existing faculty as interim chairs.
- Begin hiring additional administrative and technical staff for these departments and existing departments as needed.
- Begin hiring additional advisors.
- Hire marketing and development staff for CoSE (to be replicated later).
- Hire an undergraduate and graduate recruiter for CoSE (to be replicated later).

2025-2026

- Begin appointing associate deans for the future Ingram College of Engineering and Computer Science, with national searches if needed. (This assumes the associate deans for the College of Science and Engineering will remain with the College of Science and Mathematics, based on current personnel.)
- Continue hiring additional administrative and technical staff.
- Continue hiring advisors.
- Hire additional marketing and development staff, so there is one each for the future CoSM and ICECS.
- Hire an undergraduate and graduate recruiter, so there is one each for the future CoSM and ICECS.

2026-2027

- Finalize appointment of associate deans.
- Appoint permanent chairs and staff for new engineering departments, with a national search for chairs as needed.
- Appoint deans of colleges, with a national search as needed.
- Finalize hiring of all administrative and technical staff and advisors

In Fall 2027, the two colleges will officially launch.

The planned final year of the College of Science and Engineering is 2026-2027, which is the 60th anniversary of the founding of the College of Science and 15th anniversary of the renaming of it as the College of Science and Engineering. 2027 is also the 20th anniversary of the founding of the Ingram School of Engineering.

After the separation, the two colleges will maintain collaboration and synergy through a number of mechanisms, including joint meetings of faculty and undergraduate advisors and regular communication between the respective deans and associate deans for research. CoSM will continue to provide support courses for the degree programs in ICECS as needed, including

assistance with ABET accreditation, and ICECS departments will use courses traditionally identified as science and mathematics from those departments instead of developing their own.

It is recognized that the addition of a new college and several new departments will require additional administrative faculty and staff. The plan is to have these fully staffed by Fall 2027, along with adjusting the lack of staffing in existing departments, including academic advising. The goal is for each department to have a Chair, Associate Chair, Administrative Assistant II and III, and Academic Budget Specialist. Larger departments and those departments requiring the management of specialized equipment will require additional staff. Administrative and technical staff should be hired to offload these duties from tenure line faculty and free faculty time for research. Seed funds are also needed to develop college level research offices to better assist faculty with proposal development and grant management, which is appropriate for an R1 university. The college research offices should be eventually funded by indirect cost recovery from grants. Each college should be assigned a dedicated development officer from University Advancement to grow endowments of the colleges.

A summary of the organizational structures is given in Tables 4 and 5, with proposed new items indicated in red. Organizational charts are presented in Figures 2-5.

Table 4: Organization of the College of Science and Mathematics

Entity	Associated Staff	Reports To
Dean, College of Science and Mathematics	Dean, Senior Administrative Assistant, Administrative Assistant III	
Dept of Agricultural Sciences	Staff positions: Chair, Assoc. Chair, Admin Asst II, Admin Asst III, Academic Budget Specialist	Dean
Dept of Biology	Staff positions: Chair, Assoc. Chair, Admin Asst II (2+1), Admin Asst III, Academic Budget Specialist, Sr. Laboratory Services Tech	Dean
Dept of Chemistry & Biochemistry	Staff positions: Chair, Assoc. Chair, Admin Asst II, Admin Asst III, Academic Budget Specialist, Sr. Lab Services Tech, Scientific Instruments Tech (1+1)	Dean
School of Mathematics	Staff positions: Chair, Assoc. Chair, Asst. Chair, Admin Asst II (1+2), Admin Asst III, Academic Budget Specialist, Graduate Program Coordinator, Microcomputer Lab Coordinator, Microcomputer Lab Assistant	Dean
Dept of Physics	Staff positions: Chair, Assoc. Chair, Admin Asst II, Admin Asst III,	Dean

	Academic Budget Specialist, Lab Coordinator, Sr. Laboratory Services Tech, Scientific Instruments Tech	
Business Services	Staff positions: Academic Budget Specialist, Buyer II, Buyer III	Dean
Director of Marketing and Communications	Social Media Coordinator	Dean
Associate Dean for Research	Associate Dean, Admin Asst II, Research Coordinator (2), Grant Budget Specialist, Grant Budget Analyst	Dean
Associate Dean for Academic Affairs and Student Success	Associate Dean, Undergraduate Recruiter, Graduate Advisor and Recruiter	Dean
Assistant Dean of Assessment	Assistant Dean	Dean
Edwards Aquifer Research & Data Center	Director, Assistant Director, Lab Manager, Research Associates, Education Program Manager, Academic Budget Specialist	Dean
Advising Center	Director, Assistant Director, Admin Asst II, Student Development Specialist, Advisor I (6), Advisor II	Associate Dean for Academic Affairs and Student Success

Table 5: Organization of the Ingram College of Engineering and Computer Science

Entity	Associated Positions	Reports To
Dean, Ingram College of Engineering and Computer Science	Dean, Senior Administrative Assistant, Administrative Assistant III	
School of Computer Science	Staff positions: Director, Assoc. Director, Admin Asst II (1+1), Admin Asst III, Academic Budget Specialist, Lab Coordinator II, Systems Support Analyst, Systems Analyst II, IT Specialist	Dean
School of Construction	Staff positions: Director, Assoc. Director, Admin Asst II, Admin Asst III, Academic Budget Specialist, Laboratory Services Supervisor	Dean
Dept of Civil and Environmental Engineering	Assoc. positions: Chair, Associate Chair, Admin Asst II, Admin Asst III, Academic Budget Specialist, Lab Services Technician (2+2)	Dean

Dept of Electrical and Computer Engineering	Assoc. positions: Chair, Associate Chair, Admin Asst II, Admin Asst III, Academic Budget Specialist, Lab Services Technician	Dean
Dept. of Engineering Technology and Management	Staff positions: Chair, Admin Asst III, Admin Asst II, Academic Budget Specialist, Lab Services Technician, IT Specialist	Dean
Dept of Industrial and Manufacturing Engineering	Assoc. positions: Chair, Associate Chair, Admin Asst II, Admin Asst III, Academic Budget Specialist, Lab Services Technician (1+1)	Dean
Dept of Mechanical Engineering	Assoc. positions: Chair, Associate Chair, Admin Asst II, Admin Asst III, Academic Budget Specialist, Lab Services Technician (2+2)	Dean
Associate Dean for Accreditation	Associate Dean	Dean
Associate Dean for Academic Affairs and Student Success	Associate Dean, Undergraduate Recruiter	Dean
Associate Dean for Graduate Programs	Associate Dean, Graduate Advisor and Recruiter	Dean
Associate Dean for Research and Innovation	Associate Dean, Admin Asst II, Research Coordinator (2), Grant Budget Specialist, Grant Budget Analyst	Dean
IT Services	Associated staff positions: IT Specialists (2+2)	Dean
Infrastructure Research Lab	Associated staff positions: Director, IRL Lab Specialist	Dean
Maker Space	Associated staff positions: Director, Maker Space Lab Specialists	Dean
Business Services	Staff positions: Academic Budget Specialist, Director of Facilities, Buyer II, Buyer III	Dean
Director of Marketing and Communications	Social Media Coordinator	Dean
Director of Corporate Engagement	Director, Senior Design Coordinator, Co-op Coordinator	Dean
Advising Center	Director, Assistant Director, Admin Asst II, Student Development Specialist, Advisor I (3+6),	Associate Dean for Academic Affairs and Student Success

Figure 2: College of Science and Engineering Organizational Chart At Time of Separation (Proposed)

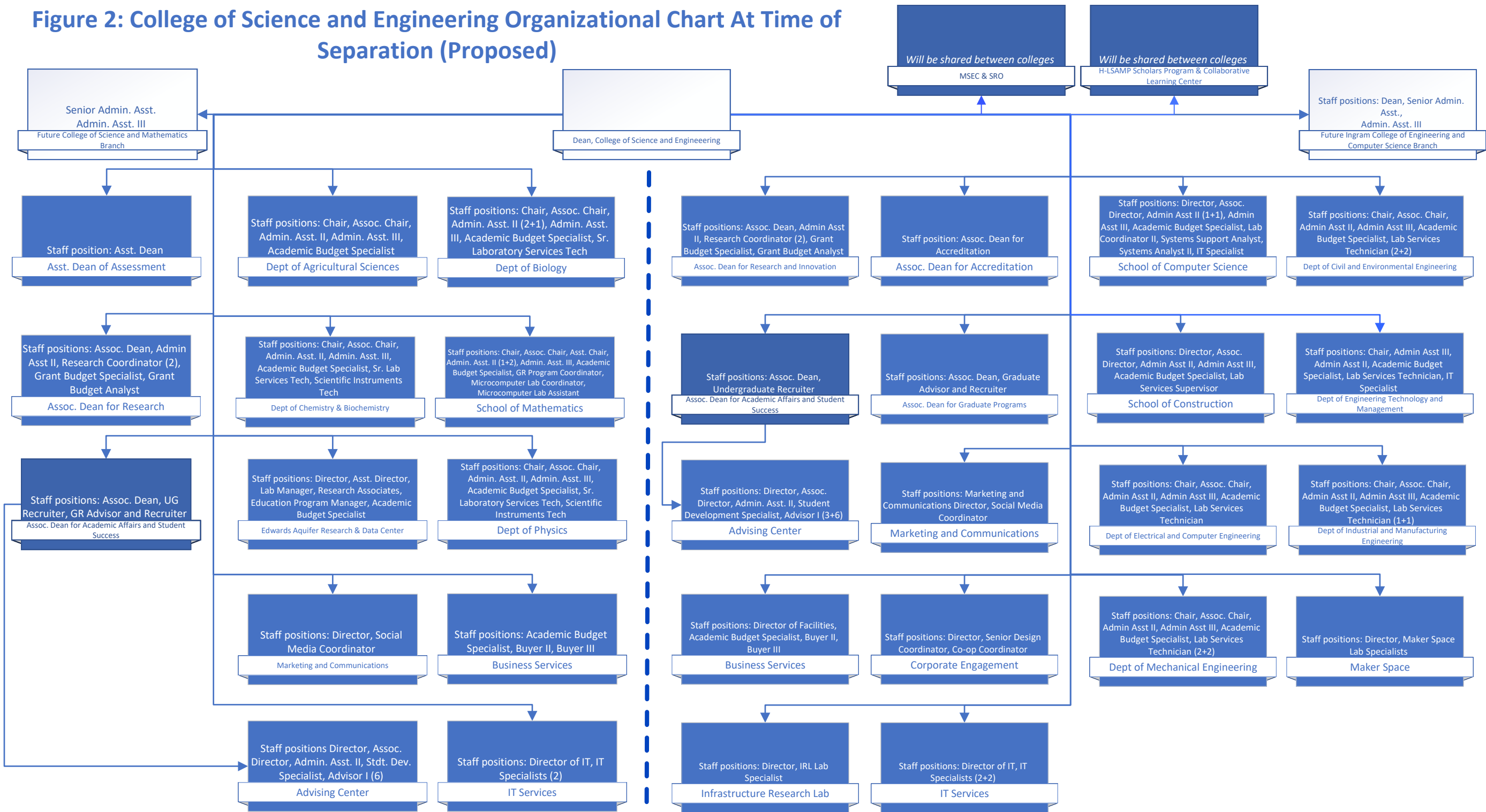


Figure 3: College of Science and Mathematics Organizational Chart (Proposed)

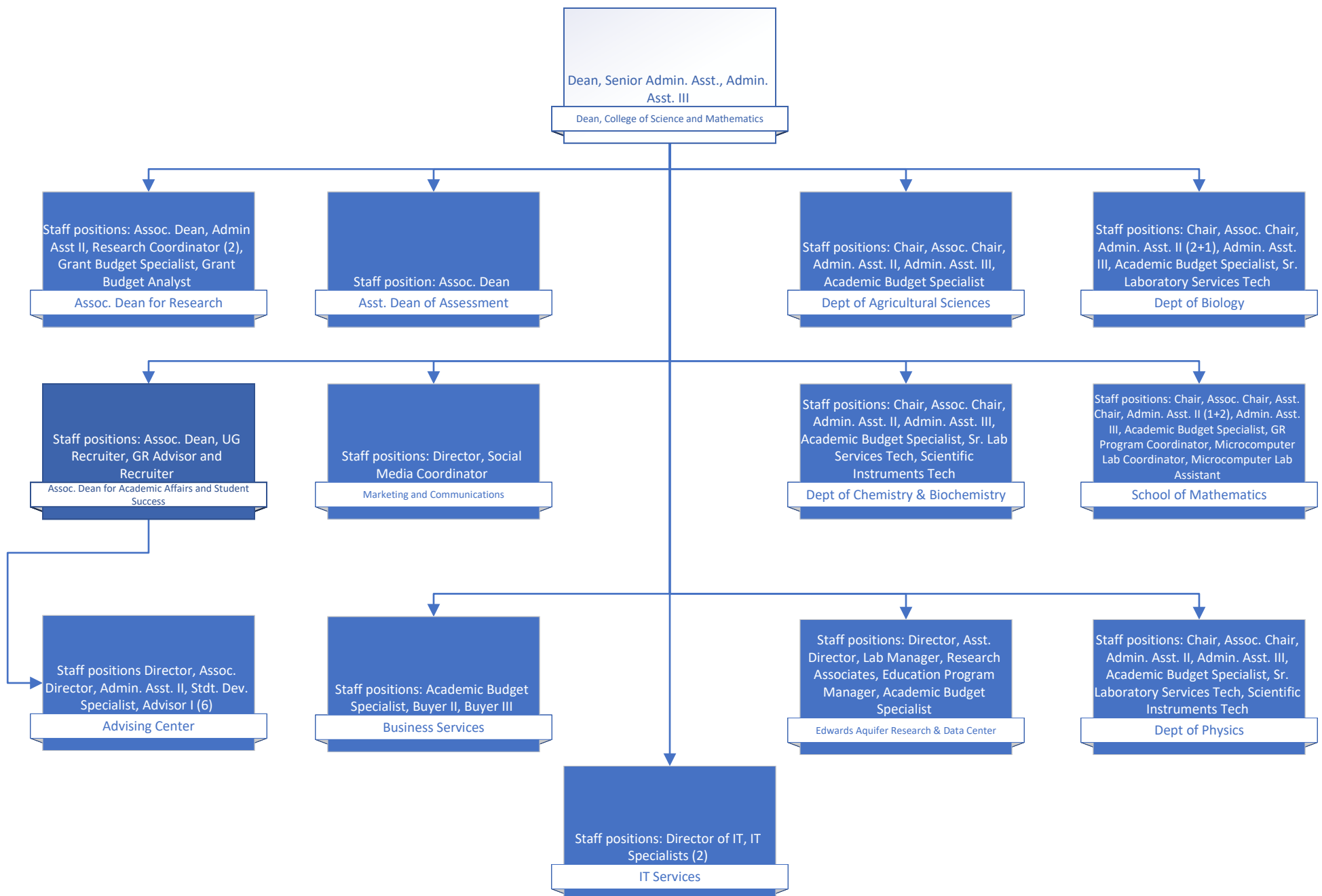
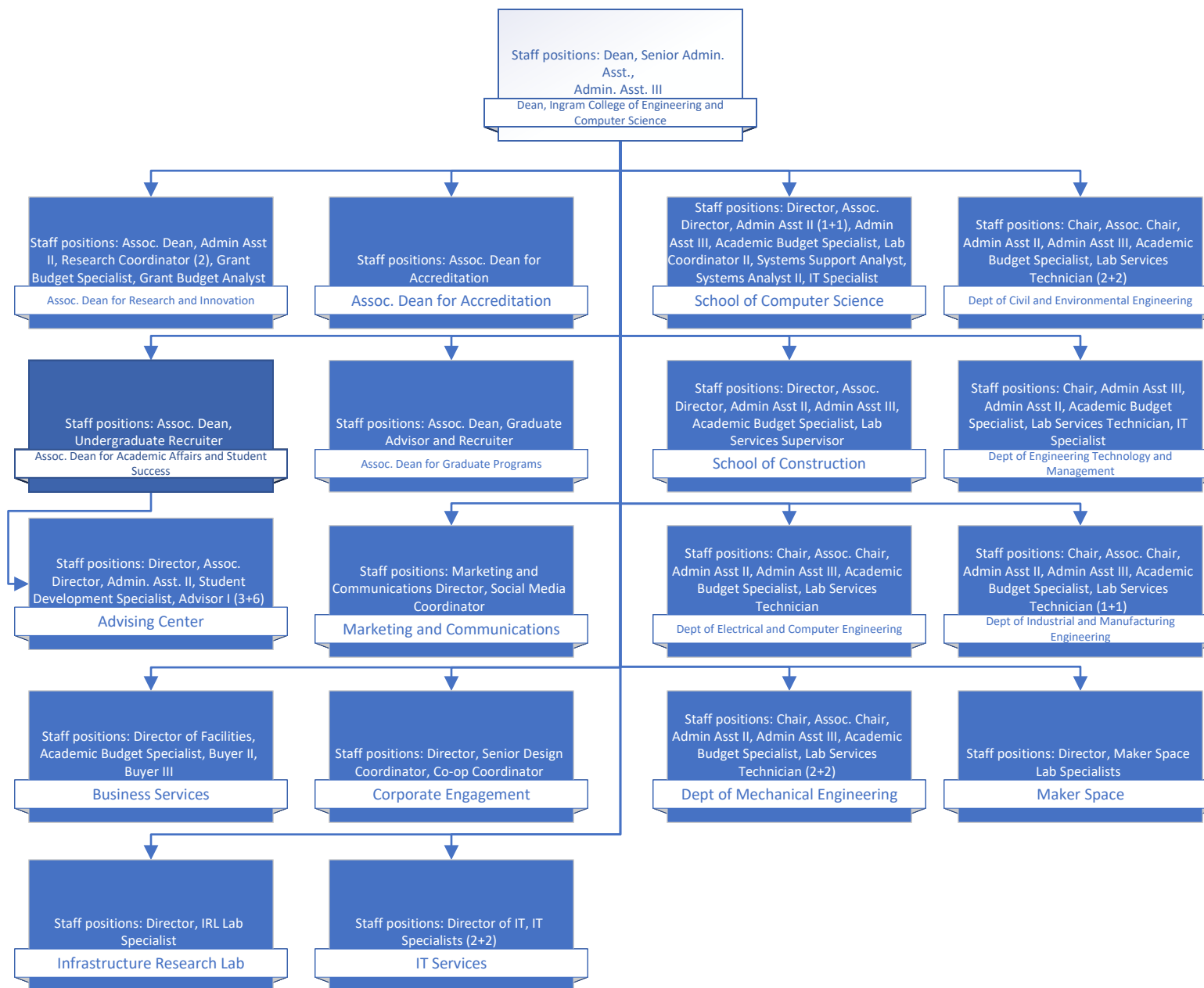


Figure 4: Ingram College of Engineering and Computer Science Organizational Chart (Proposed)



A list of the current positions which would be replaced when the colleges separate into this organization is:

- Dean of the College of Science and Engineering
- Director of the Ingram School of Engineering
- Chair of the Department of Engineering Technology

A list of the new positions is:

- Dean of the College of Science and Mathematics
- Dean of the Ingram College of Engineering and Computer Science
- Associate Dean for Academic Affairs and Student Success
- Associate Dean for Graduate Programs
- Associate Dean for Research and Innovation
- Associate Dean for Accreditation
- Director of the School of Construction
- Chair of the Department of Civil and Environmental Engineering
- Chair of the Department of Electrical and Computer Engineering
- Chair of the Department of Engineering Technology and Management
- Chair of the Department of Industrial and Manufacturing Engineering
- Chair of the Department of Mechanical Engineering
- Academic Budget Specialists (7)
- Senior Administrative Assistant
- Administrative Assistant IIs (10)
- Administrative Assistant IIIs (5)
- Buyer II
- Buyer III
- Research Coordinators (2)
- Grant Budget Specialist (2)
- Grant Budget Analyst (2)
- Director of Facilities
- Director of Marketing and Communications (2)
- Social Media Coordinator (2)
- Development Officer (2) – would report to University Advancement
- Undergraduate Recruiter (2)
- Graduate Recruiter (2)
- Microcomputer Lab Assistant (Mathematics)
- Scientific Instruments Technician (Chemistry and Biochemistry)
- Lab Coordinator (Physics)
- Director of Infrastructure Research Laboratory
- Infrastructure Research Laboratory Specialist
- Director of Maker Space

- Maker Space Laboratory Specialist
- Director of Corporate Engagement
- Senior Design Coordinator
- Co-op Coordinator
- Director of Advising
- Assistant Director of Advising
- Student Development Specialist
- Advisor I (6)
- Lab Services Technician (4)
- Director of IT (2)
- IT Specialist (2)

Note that resource needs for Materials Science, Engineering and Commercialization, and the Shared Research Organization are not listed above but are indicated at the end of this document.

Additionally, the Chairs and Associate Chairs of the Departments of Computer Science and Mathematics would become Directors and Associate Directors of the Schools of Computer Science and Mathematics, respectively.

All of these will be evaluated annually through the 3 years of the separation process and adjusted as needed depending on enrollments, research grant expenditures, and the new university budget model under development.

The sections below provide the rationale for the requests for increased staff resources.

Advising

Advising is currently greatly understaffed with a preferred ratio of advisor-students of 1-300 and a 1-400 maximum. Using a 1-350 ratio for the number of students in Fall 2023 would require 6 additional advisors in addition to the infrastructure for an Advising Office in the ICECS (Director of Advising, Assistant Director of Advising, Student Development Specialist). This allows for growth in Fall 2024 with additional growth requiring additional advising staff.

Department of Biology

Due to very high enrollment in the department, the ratio of staff to faculty and staff to semester credit hours is low. To address this, one Administrative Assistant II position is requested.

Department of Chemistry and Biochemistry

Due to a large number of service courses taught by the department, the ratio of staff to faculty and staff to semester credit hours is low. To address this, one Administrative Assistant II position

is requested. As enrollment in lower division courses has been increasing and is expected to continue doing so, a second Scientific Instruments Technician is also requested.

School of Computer Science

Due to very high enrollment in the department, the ratio of staff to faculty and staff to semester credit hours is low. To address this, one Administrative Assistant II position is requested.

Ingram College of Engineering and Computer Science

The ISoE currently has six Laboratory Services Technicians which service the various programs. As these programs are distributed across the proposed departments, expected growth and needs for added specialization of laboratory support will require four additional Laboratory Services Technicians. The same expected growth will require two additional IT Specialist positions.

School of Mathematics

Due to a large number of service courses taught by the department, the ratio of staff to faculty and staff to semester credit hours is very low and considerably lower than every other department. To address this, two Administrative Assistant II positions are requested.

The Technical Support/Lab Coordinator currently serves multiple roles for the department, including managing the departmental tutoring center (hiring/scheduling tutors, maintaining the space), supporting four computer teaching labs, maintaining computer equipment for ≈ 90 faculty members and 40+ graduate/doctoral assistants, maintaining computer equipment and manages other equipment (e.g. poster printer, copy machines) for the departmental office, maintaining the departmental website/social media presence, and assisting in purchasing for the department and grant activities. Since this position was created in 2009, the department has grown significantly. For example, since 2012 the number of faculty and SCH **has increased by 40%** from 63 faculty and 26,230 SCH in Fall 2012 to 88 and 39,684 in Fall 2023 and the number of teaching computer classrooms has increased from three to four. To address this, it is requested that this position be split into the positions of Microcomputer Lab Coordinator and Systems Support Analyst.

Department of Physics

The Department of Physics presently benefits from the expertise of two technicians who fulfill diverse responsibilities. Their duties encompass overseeing the Computational Physics Laboratory, serving as support lecturers for PHYS 3411, 3416, 3417, 5304, 5322, 5324, and 5332, managing two shared laboratories dedicated to physics research and instruction, maintaining 12 computer teaching labs, upkeeping computer equipment for 53 faculty and graduate majors, providing support to advanced research equipment for 14 research-active faculty members, managing all departmental inventory processes, providing scientific support for upper division

courses and research groups, liaison between physics faculty and SRO, MARC, and Ingram Makerspace, leading initiatives related to the renovation and remodeling of both research and academic spaces, coordinating the international shipping and customs processes for advanced research equipment, and participating in radiation and laboratory safety committees at both college and university level. The department has experienced significant growth in lower division courses. Currently, the department is formulating a comprehensive plan aimed at doubling the capacity of PHYS 1430 and PHYS 1115. Anticipating an enrollment increase in these courses of over 600 students next academic year, coupled with expectations to establish two/three new tenure-faculty lines, arises a critical need for technical support in the design, development, and establishment of educational, technological, and research services. In response to these evolving demands, the department seeks the addition of a Laboratory Coordinator.

Materials Science, Engineering and Commercialization Program

As mentioned earlier, MSEC will become an interdepartmental Ph. D. program with ties to both colleges guided by a binding MOU between the two deans, the provost, and the vice-president for research. The MOU should be in harmony with the key principles below:

- Faculty from each College can participate and contribute to MSEC – teaching courses, supervising students, and serving on dissertation and other program committees.
- The current designated 8 MSEC faculty positions are retained. If needed, replacement faculty for these designated positions will be selected with the input of the MSEC executive/program committee by faculty that have a materials-focused research and commitment to graduate student training. As the needs of the program dictate, this replacement process need not be restricted to the current college/department of the departing designated faculty member.
- If DIA lines are funded through the separate Colleges as opposed to directly from MSEC, these DIA lines can be moved between colleges if needed to support student's research interests.
- The SRO or its successor organization/center is equally accessible to all faculty and students in the MSEC program, regardless of the college to which these faculty and students belong.
- MSEC must continue to fund faculty from McCoy College of business and/or the Colleges of Science and Engineering to lead entrepreneurship and commercialization courses and boot camps.
- Faculty will be encouraged to submit multi-investigator grants through MSEC, particularly where these grants fund graduate student training and research or interdisciplinary studies related to materials science and engineering.
- MSEC Dissertation Committee rules are retained and external members will be defined as not from either College.
- Travel requests by students are routed through MSEC to the department and college of the advisor to the Graduate College.

- MSEC Student are free to join student clubs, organizations, meetings irrespective of college (and the faculty leader's college).

The specific structure of the MSEC program is envisioned as follows:

Director (1) and an Associate/Assistant Director (1), ideally these two leaders represent both Colleges.

An executive or Program committee consisting of the Director, Associate/Assistant Director and representatives from each department contributing to the program: From the College of Science and Mathematics: Biology, Chemistry & Biochemistry, and Physics; From the College of Engineering and Computer Science: Civil and Environmental Engineering, Construction, Electrical and Computer Engineering, Engineering Technology and Management, Industrial and Manufacturing Engineering, and Mechanical Engineering; and a representative from the McCoy College of Business. The executive committee will be charged with: overseeing courses and curriculum, admissions, degree requirements, administration of the student assistantship awards, designating MSEC regular and associate graduate faculty, and other policy matters.

Resources required for the MSEC program include:

- Director (1 Tenured or tenure-track faculty member with course release and summer support)
- Assist/Assoc. Director (1 Tenured or tenure-track faculty member with course release and summer support). These two positions support the goals of promoting student success and offering high-quality academic programs through their work recruiting diverse and talented students and ensuring the success of students in MSEC.
- 1 NLF line for faculty member in the McCoy College of Business to support the Commercialization courses and boot camps. This position ensures that resources are available for the leading the commercialization and entrepreneur components that distinguish MSEC, addressing the goal of promoting student success and offering high-quality academic programs.
- Full-time administrative support (1 Admin III). The current administrative duties for MSEC are split among two administrative staff who both also have other duties. A dedicated administrative staff member for MSEC will ensure that students and faculty have the support necessary for effective recruitment, processing appointments, facilitating advising, grant support, and other essential duties in addressing the goals of ensuring student success and providing necessary support for achieving the universities strategic direction of becoming an R1 institution.
- DIAs (2 years @ 36K) (31 lines) The current level of student support through Doctoral Instructional Assistantships for MSEC should be maintained. These assistantships are essential to recruit and retain talented students to achieve the goals of advancing progress in research.

- Access to SRO facilities for MSEC faculty and students with user fees similar to those currently in place.

To best implement the principle of access to the SRO facilities, the SRO should also remain aligned with MSEC and share a similar organization as MSEC, being jointly situated with both colleges. SRO will continue to work with users outside the college, including commercial users with higher usage fee structure. It is envisioned that the MSEC director will also serve as the director of the SRO. The personnel resource requirements for the SRO include:

- SRO Manager
- Administrative Coordinator III
- Resource Manager (Admin III)
- Technical Staff (4, at various levels)
- DA lines (2)

This retains much of the current staffing of the SRO, with the addition of a dedicated administrative position (Resource Manager) and 2 DA lines. These additions will be need to address current staff shortages in the SRO, which have required technical staff to take on administrative support roles. The additional Admin III position will take over these duties as well as coordinate facilities usage between the two colleges. The two additional DA lines are to assist MSEC student training on the instruments, a role currently filled by senior technical staff. In total, these two additions will allow the technical staff to focus on maintaining and operating the SRO facilities, which are essential for the training of our students and the research that is done by MSEC students and faculty. Thus, these additions address the goals of achieving significant progress in research and providing the services, resources, and infrastructure to support the University's strategic direction.

**Figure 5: Entities Shared Between Colleges Organizational Chart (Proposed):
MSEC, SRO, and H-LSAMP**

MSEC: Materials Science, Engineering, and Commercialization
SRO: Shared Research Operations
H-LSAMP: Houston-Louis Stokes STEM Pathways and Research Alliance
(includes the Collaborative Learning Center)

