FACULTY SENATE
COMMITTEE ANNUAL REPORTS
2022-2023

Standing Committees
Advisory Committee on Scholarship and Research (Moore)
Budget Review (Jones)
Bylaws Review (Scholtz)
Convocations (Huber, Keegin)
Diversity (Brown)
EOP Advisory (Yull, Abashian)
Intercollegiate Athletics (Mason-Williams)
Library (vacant)
Professional Standards (Guay)
Program Review Committee (Reiter)
University Undergraduate Curriculum (Lander)

Joint Committees
Information and Educational Technology (Loewen, Chiu)
Committee for the University Environment (Homsy)
ITS Research Computing Advisory (Bodur, Chiu)
Micro-credential (Lee, Madden)
University Calendar (Hall)

Other
Committee on Committees (Hess, Gilman, incoming chair)
Evaluation Coordinating Committee (Beedle)
Faculty Athletics Representative (Mastroleo)
Intercollegiate Athletics Board (Fauci)

Faculty Senate Advisory Committee on Scholarship and Research (ACSR)
<u>Annual Report 2022-2023</u>

In 2022-23, the Advisory Committee on Scholarship and Research (ACSR) had its second year as a Faculty Senate joint committee. It was previously a subcommittee of the Graduate Council.

ACSR advises the Vice President for Research on all matters relating to research and scholarly activities whether externally sponsored or funded within the University; promotes the development and growth of sponsored research and training programs throughout the University; advises the Vice President for Research with respect to allocations of funds supporting Organized Research Centers and Institutes, travel, publications, and other forms of internal support.

Membership

- Alexandra Moore (Chair and Provost Appointee) Professor Department of English, TAE Chair Citizenship, Rights and Cultural Belonging

- Manoj Agarwal (Faculty Senate) Professor, School of Management
- Serdar Atav (Faculty Senate) Professor, Decker College of Nursing and Health Sciences
- Christopher Bishop (Faculty Senate) Professor, Department of Psychology
- Daniel Davis (Provost Appointee) Associate Professor, Department of Music, TAE Chair Material and Visual Worlds
- Tony Davis (Faculty Senate) Assistant Professor, Department of Pharmaceutical Sciences
- Nicole Fenty (Faculty Senate) Associate Professor, Department of Teaching, Learning, and Educational Leadership
- Eric Hoffman (Ex Officio) Associate Dean for Research, School of Pharmacy and Pharmaceutical Sciences
- Murali Jagannathan (Ex Officio) Associate Dean for Research, School of Management
- Carl Lipo (Ex Officio) Associate Dean for Research, Harpur College of Arts and Sciences
- Vipul Lugade (Ex Officio) Associate Professor and Director of the MARL- serving in the role of Associate Dean for Research, Decker College of Nursing and Health Sciences
- Kristina Marty (Ex Officio) Associate Dean for Research, College of Community and Public Affairs
- Mark Poliks (Provost Appointee) Professor, Department of Systems Science and Industrial Engineering, TAE Chair Smart Energy
- Xingye Qiao (Provost Appointee) Associate Professor, Department of Mathematical Sciences TAE Chair Data Sciences
- Gail Rattinger (Provost Appointee) Professor and Associate Dean for Academic Affairs and Assessment Department of Pharmaceutical Sciences, School of Pharmacy and Pharmaceutical Sciences, TAE Chair Health Sciences
- Meera Sampath (Ex Officio) Associate Dean for Research, Thomas J. Watson College of Engineering and Applied Science
- Kaiming Ye (Faculty Senate) Professor, Department of Biomedical Engineering
- Sangwon Yoon (Provost Appointee) Professor, Department of Systems Science and Industrial Engineering

Most of ACSR's activities are focused in the Spring Semester. ACSR met biweekly and as needed throughout the Spring semester from February 28 to May 1, 2023.

Activities

- ACSR members were asked to volunteer to serve on the internal review committee for the Chancellor's Award for Excellence in Scholarship and Creative Activities.

- The Division of Research received 11 requests for graduate assistant support for centers and institutes. ACSR reviewed these requests and provided funding recommendations. Based on available funds and these recommendations, seven GAs were funded.

- Reviewed proposals for the University's Interdisciplinary Collaborative Grants. The Division of Research received two proposals. ACSR recommended funding one proposal:
  - ICG01_2023: *Physical Unclonable Functions Built Using Electrospray.* Paul Chiarot and J. David Schaffer

- Normally, ACSR would review and recommend proposals for the annual call for new organized research centers. However, this year, the Division of Research did not receive any proposals for organized research centers.

- ACSR received annual reports from 27 centers and institutes. For this year's annual review, ACSR requested the centers/institutes to provide a list of objectives or goals for 2022 year and to list any successes and challenges related to these objectives as well as to define goals and objectives for 2023. ACSR reviewed and discussed these reports over three meetings.

- ACSR was also available, as needed, to review internal submissions to external funding opportunities with a limit on the number of institutional submissions. This included reviews of limited submission opportunities from the US Department of State and the National Science Foundation

Respectfully submitted,

Alexandra Moore, Committee Chair

Please submit the report via email to Kellie Hovancik at khovanci@binghamton.edu*.*

Faculty Senate Budget Review Committee

Annual Report 2022-2023

July 24, 2023

<u>Overview</u>

The Faculty Senate's Budget Review Committee (BRC) met 13 times during the 2022-2023 academic year usually in a hybrid format. The BRC met with the President, reviewed the Divisions of Advancement, Diversity, Equity, and Inclusion (DDEI), Operations, Research, and Student Affairs with their respective Vice Presidents and reviewed five of the colleges and schools with their respective Deans per its charge. The Committee was not asked to review any new academic programs this year. A full list of the BRC's meetings during the academic year is as follows:

1. 9/30/2022 Organizational Meeting
2. 10/13/2022 Review of Student Affairs with Vice President Rose
3. 10/28/2022 Review of Operations and Capital Planning with Vice President Navarro
4. 11/4/2022 Review of University Budget with President Stenger
5. 11/10/2021 Review of Advancement and BU Foundation with Vice President Koch and Executive Director Doyle
6. 12/2/2022 Review of Research Division with Vice President Sammakia and Associate Vice President Curtain
7. 1/20/2023 Review of Admissions with Vice Provost Loewen
8. 2/2/2023 Review of Division of Diversity, Equity, and Inclusion with Vice President Jones
9. 3/10/2023 Review of Decker College of Nursing and Health Sciences with Dean Ortiz
10. 3/16/2023 Review of School of Pharmacy and Pharmaceutical Sciences with Dean Nagaraju
11. 3/23/2023 Review of Graduate School with Interim Dean Mahler
12. 4/13/2023 Review of CCPA with Dean Bronstein
13. 4/27/2023 Review of Harpur College with Dean Klin

CFO John Cordi and Provost Donald Hall are both members of the committee.

The Committee had wide-ranging conversations throughout the year. As was detailed in last year's annual report, Binghamton University came out of the global pandemic well positioned to continue to grow and pursue opportunities for investment while maintaining the integrity of our educational programs and student experience. This is a testament to the administration's careful management during the crisis period. In addition to its usual role in reviewing the various divisions, schools, and colleges, the BRC followed several developments over the course of the academic year:

New Energy New York

On September 2, 2022, it was announced that Binghamton University was awarded more than $113 million to establish a hub for battery technology innovation combining $63.7 million in federal funding with $50 million in additional funding from New York State. These funds are allocated over a period of years and to-date, Binghamton University has received around $25M.

Procurement

On December 20, 2022, the Governor signed legislation that significantly lowered the threshold for OSC review of procurement to the pre-2009 level of $75,000 for SUNY, which will reduce campus flexibility with respect to purchasing.

Capital Projects

Vice President Navarro and her staff briefed BRC on capital projects on October 28, 2022. Among the major ongoing projects, the 3rd floor library renovation is scheduled for completion in September 2024, the new welcome center should be completed in early 2024, the Gannett facility is complete, Science 3 – Phase 1 abatement/demo will be completed in October 2023 (after which construction will be bid), Old Rafuse will be completed by October 2023, and the Fieldhouse is now under construction.

Major new projects include Oneida Hall (CIW), a new lecture hall, a new addition to the East Gym, the Fine Arts master plan, and the Plaza deck rehab.

Enrollment

Vice Provost Loewen and his staff met with BRC on January 20th to recap the Fall 2022 enrollment cycle. This marked the second test-optional admissions cycle with about a 50/50 split in the newly enrolled students who did and did not submit test scores.

First-year applications increased steadily from 2019 to 2022 from 37,517 to 41,649 and we made offers to 17,385 students in 2022. The deposit rate was around 20-21% over the past three cycles, but the melt rate has increased from around 11% in 2019 to near or slightly above 14% for the three most recently completed cycles reflecting recent changes in admissions. The first-year class increased from 2,859 in 2020 to 3,106 in 2022, however transfer applications have been trending steadily downwards and new transfer students have declined to 832 in 2022. Long-term demographic trends are a significant and well-known challenge in the higher education landscape. Overall SUNY enrollments declined steadily from over 460,000 in 2011 to around 416,000 in 2019, but the decline has accelerated with overall enrollments falling to around 370,000 in 2021. Community college enrollment has declined from just below a quarter of a million in 2011 to around 161,000 in 2021 – a decrease of more than 85,000. Enrollment at SUNY comprehensive colleges has declined by around 19,000 over the same timeframe (to around 74,000 in 2021), while enrollment at the SUNY technology colleges was relatively steady or even increasing but declined somewhat over the past several years to around 23,500. Within SUNY, the only sector that is growing with respect to enrollments are the doctoral granting institutions.

First-year out of state enrollments have been generally trending upwards reaching 351 in 2022. On the other hand, first-year international enrollment declined to around 50 in 2021 and only partially recovered in 2022. This reflects difficulties in international recruiting caused by the pandemic. New underrepresented students have been trending steadily upwards since 2019 reaching over 600 in 2022. Underrepresented students made up over 20% of the incoming class in 2022 and 46% are students of color.

New SUNY Hiring Initiative in 2022-23

SUNY received $53 million in additional base funding from NYS in 2022 to support hiring new faculty. Binghamton University received $6.5 million from this pool or just over 12% of the total, although benefits were not covered by these funds. Accounting for benefits, which increase the actual cost of new faculty by a factor of around 1.7, this was projected to fund around $3.8 million in salary for new faculty.

During AY 2022-23, Binghamton conducted 36 faculty searches tied to this initiative of which 21 were successful, 11 were unsuccessful, and 4 of which were still ongoing as of this writing but were deemed likely to fail. We note that these searches are in addition to other

regular searches not tied to the hiring initiative. Unsuccessful searches are expected to be rerun by the same units in the upcoming academic year. The new hiring carried out under the SUNY initiative was targeted primarily towards fields that will bring in new external funding. SOM and CCPA each hired one faculty member from these searches. Watson ran 18 searches of which 10 were successful and Harpur ran 13 searches of which 9 were successful. SOPPS ran two unsuccessful searches and Decker ran one unsuccessful search. The Harpur searches were all in sciences and social sciences - primarily in fundable STEM related fields.

While the initiative funded faculty salaries, the focus on fundable STEM related fields implies that startup costs are significant. The total committed startup costs associated with the successful hires were $5.2 million as of this writing, but the university anticipates that the total startup associated with all 36 hires will be around $10 million. BRC and FSEC have frequently heard concerns about uncompetitive startup packages for new hires particularly in hard science fields where startup packages can be very large due to equipment and lab costs. The provost has initiated a new cost sharing model for startup packages in which startup costs will be split between the central administration and the hiring unit. For the AY 2022-23 hiring cycle, the central administration covered 75% and the units covered the remaining 25%. Over the following two years, the central administration will cover a declining share of the startup. For new searches in the upcoming academic year (not including the ones that will be rerun), 2/3 will be covered by central administration. The following year, startup will be split 50/50.

Additional SUNY Funding

SUNY also received $60 million in one-time funds targeted towards strategic enrollment growth and student success of which Binghamton University received $1.8 million. The university allocated these funds as follows: $750,000 for undergraduate recruitment growth, $147,000 for a campus diversity video, $333,000 for expanded recruiting in India, $389,000 to support need-based scholarships, $75,000 for a micro-credentials software package, and $100,000 for a proposed BA completion degree.

Trends in Tenure Track Faculty Levels

From Fall 2011 to Fall 2017, the size of the tenured and tenure-track faculty increased from 452 to 587. It remained stable for the following several years, decreasing to 580 in Fall 2019, but reaching a high of 594 in Fall 2020. It decreased to 581 in Fall 2021, which is not

surprising given the pandemic. The tenure track faculty level rebounded the following year as hiring resumed, reaching its highest level of 598 in Fall 2022.

Faculty numbers for Fall 2023 will be released later in the year, but the hiring initiative discussed above resulted in 21 new faculty hires. Beyond that initiative, the university completed 43 additional successful faculty hires with 19 more searches still in progress (10 of which are in Decker) as of this writing. Of the 43 successful hires, Harpur accounts for 26 with 3 searches still ongoing, SOM accounts for 5 with 1 more ongoing, CCPA accounts for 4 with 1 more ongoing, Watson accounts for 3 with 4 more ongoing, Decker hired 3 faculty and SOPPS and the library each hired one. Combining these figures, the university has hired 64 new faculty as of this writing. The net increase in faculty will be less than this due to attrition, but it seems likely that the size of the tenure track faculty will reach its all-time high in Fall 2023.

The largest academic unit, Harpur College, hired a total of 35 new tenure track faculty including those hired under the new initiative, the new Director of the Arts, and a new EIP Associate Professor. Of these, 3 are tenure-track instructors, 26 are Assistant Professors, and 6 are Associate Professors. Two of the Assistant Professors will not start until September of 2024, however. Harpur College had 368 full-time tenured or TT faculty in Fall 2022 according to the President's most recent Financial Report. As of this writing, it is projected that there will be 384 tenured or TT faculty in the college in Fall 2023 (a net increase of 16) excluding the two Assistant Professors starting in Fall 2024.

NYS Budget

NYS budget negotiations proceeded throughout the spring. The Governor's Executive Budget released in February 2023 incorporated several key items affecting SUNY.[1] It proposed the creation of a $75 million Transformation Initiatives Fund, a $200 million SUNY-wide Digital Transformation Initiative, and "re-envisioning the $60.0M in former one-time funds from the 2022-23 funding". The Governor proposed up to 3% annual increases in the resident undergraduate tuition rate across SUNY and proposed a differential tuition policy which would have allowed the four university centers to increase resident undergraduate tuition by a further 6% until reaching a cap of 1.3 times the rate at other state campuses. Non-resident tuition at the four university centers would have been allowed to increase by up to 10%.

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[1] The following discussion draws on State University of New York (SUNY) 2023/24 Executive Budget Summary: February 1, 2023.

The enacted budget included the $75 million Transformational Initiative Fund and the $200 million SUNY-wide Digital Transformation Initiative, but it did not include either the proposed general tuition increases or the differential tuition policy for the four university centers. Instead, SUNY received an additional $163 million in new base funding to be allocated across the campuses by the SUNY Board of Trustees.[2] The allocation of the funds was described by Chancellor King in a June 6 public announcement.[3] President Stenger subsequently briefed the leaders of the Faculty Senate and the Professional Staff Senate in a memo providing additional details, which we draw on in this report.

Binghamton University received $15.3 million of the $163 million pool of base funding, which was 9.4% of the total funds. Buffalo and Stony Brook received $26.3 and $24.1 million respectively (16.1% and 14.8% respectively of total funds). Albany received $13.7 million – the lowest among the four centers. Collectively, the four university centers received 48.7% of total funds. The four other doctoral institutions in SUNY collectively received $13.7 million (8.4% of total funds), so that the combined percentage for the four centers and the four other doctoral institutions was 57.1%. Cornell received an additional $5.4 million, and Alfred Ceramics received $0.6 million. The twelve SUNY comprehensive colleges collectively received $42.3 million or around 26% of total funds and the eight SUNY technology colleges collectively received $21.5 million or 13.2% of the total. The community colleges did not receive any new base funding.

Binghamton's $15.3 million allocation includes $2.93M of required expenditures in six categories broken down as follows:

1. Graduate Worker Fee Mitigation, $563,300.
2. Food Insecurity, $50,000.
3. Mental Health Supports, $554,700.
4. Support for Students with Disabilities, $636,200.
5. Internship Opportunities, $725,700.
6. Research Support, $400,000.

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[2] See https://www.suny.edu/suny-news/press-releases/5-23/5-3-23-statement/index.html
[3] See https://www.suny.edu/about/leadership/board-of-trustees/meetings/webcastdocs/2023-28_Resolution_Allocation_New_Monies_Invest_2023_24_June_6_2023.pdf

The remaining funds total $12.37M of new Operational Funds, which carry employee benefits if they are used to pay salaries. According to the President, the Business Office projects that the contractual raises owed under the new CSEA and UUP contracts as well as equivalent increases to management confidential and other represented employees to be $10.7 million of which $3.3M is contractual for campus for 2022-23, $6M is for 2023-24 ($4M for academic affairs and $2M for other divisions), $1M is for the $400 lump sum UUP raises, and $400,000 for management confidential. This results in a net increase to base funding of approximately $1.67 million ($12.37M - $10.7M).

According to President Stenger, the university's prudent financial management over the previous two years resulted in $4 million already saved to meet upcoming contractual salary obligations. Consequently, he has implemented a plan to allocate $5.67M in new funding to targeted investments in programs and projects. Although all divisions will receive at least $75,000 in new funding, the largest allocations are to Academic Affairs ($3.4M), Student Affairs ($903,793), Operations ($629,316), and Athletics ($250,576).

Unfortunately, Binghamton received just $385,000 of the one-time Transformation Initiative Funds compared to $1.8M in 2022-23. One source of confusion is that Chancellor King's memo describing the allocation totals up to $59.9M, but the total funding is $75M.

According to the Governor's announcement on May 3rd, "the budget agreement includes a multiyear commitment to provide SUNY and CUNY with $90 million (4 percent) general operating aid increases ($54 million for SUNY, $36 million for CUNY) in each of the following two academic years and provides both systems with flexibility to increase non-resident tuition to generate additional campus operating revenue."[4]

New CSEA and UUP Contracts

The recently negotiated UUP contract for 2022-2026 (not yet ratified) includes various provisions for salary and bonus payments:

1. 2% ATB increase to base retroactive to either July 2 or September 1, 2022, and a 0.5% pool for a flat ATB of $400 added to base on July 1, 2023.

2. 3% ATB increases to base for 2023, 2024, and 2025 and 0.5% pools for DSI added to base for 2024, 2025, and 2026.

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[4] Governor Kathy Hochul, Governor Hochul Announces Unprecedented Support for Education in FY 2024 Budget, Including $34.5 Billion in School Aid, May 3, 2023.

3. Retention awards to base for employees with 7 and 12 or more years of service ($1,000 and $1,800 respectively), which effectively replaces the compression adjustment from the previous contract.

4. Two lump sum bonuses of $1,500 in 2024 and 2025

The CSEA contract ratified in 2022 includes similar provisions including 2% ATB increases for the first two years followed by 3% increases in the following three years and $3,000 bonus payments.

The estimated budget impact of the 2% and 3% ATB increases for 2022 and 2023 including retroactive payments and equivalent increases for other employees is estimated to cost $10.7M as discussed above. In 2024 and 2025, Binghamton will need to pay for the 3.5% increases to base (3% ATB plus 0.5% DSI pool), the retention awards, and the lump sum bonus payments. The 3.5% increases in 2024 and 2025 are likely to add a bit over $6M to our base budget in each of the two years. The lump sum bonus payments will lead to additional payouts in each of the two years, although these are not added to base. The retention awards will further add to the campus's base budget when fully implemented.

Change in Binghamton's Legislative Appropriation

While the negotiated salary increases are needed to maintain the competitiveness of the university's salary structure, which is in turn critical for us to be able to hire and retain high quality faculty and staff, the unfunded mandates are a significant problem for the campus. As outlined above, the contract raises will cost the campus more than $20M annually in increased salaries by 2025.

Binghamton University's legislative appropriation was around $43M for the previous three academic years but was projected to be $45M for AY 2022-23.[5] The addition of $6.5 million from last year's SUNY hiring initiative had an equivalent impact of approximately $3.8 million after accounting for payment of benefits. For AY 2023-24, Binghamton is receiving an additional $15.6M, which will result in an effective increase of around $20M from $45M to $64.4 ($45 + $3.8 + $15.6) or a 43% increase. Without further increases in our legislative appropriation or increases in tuition, the negotiated salary increases will essentially offset the increase in our appropriation within the next two years. As stated above, however, the recent

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[5] See https://www.binghamton.edu/financeandbudgeting/pdfs/financial-and-budget-report-2017-2022.pdf

budget enacted includes a commitment for an additional $54M to SUNY in each of the next two academic years. If Binghamton receives the same portion of these funds as it did from this year's $163M (9.4%), this will add an additional $5M in each of the next two years.

In real terms, SUNY's tuition rate has declined significantly over the past year given the combination of flat nominal tuition and the recent high inflation in the United States. At the same time, inflation has driven up costs in higher education. The HEPI index, for example, increased by 5.2% in 2022 and is projected to remain elevated in 2023 as well. Binghamton University has seen rising costs due to inflation with respect to food, utilities, and construction.

Excelerate Campaign

Binghamton's ongoing Excelerate Campaign moves into its final year in 2023. BRC received an update from Vice President Koch on May 9th. At that time, the campaign had secured about 79% of its $220M goal having received cash gifts of $157M, deferred gifts of $6.45M (of which, around $1M are irrevocable), gifts in kind of $7.3M, and gifts to the Research Foundation of $2.9M. Advancement is planning the "Excelerator initiative" to be held in April 2024, which will be one of the final events of the public phase of the campaign.

These figures did not include two gifts totaling $37.5M in newly endowed scholarships. One $25M gift creates $10,000 scholarships for up to four years for 20 first year students and full ride scholarships for 5 first-year students. A second gift of $12.5M pays tuition for graduate students pursuing an MFA degree (up to 30 students in steady state), which should help ensure the success of the recently launched MFA in Cinema. Including these and other recent gifts puts the campaign quite close to its current goal.

In another recent development, NYS has created a $500M state matching fund for SUNY endowment. Under this program, NYS provides an additional 50 cents on the dollar for every endowment gift to one of the four university centers through April 30, 2026, or until the funds have been used. Recent endowment gifts to Binghamton should raise an additional $21M through this program for a combined impact of $64M representing a nearly 50% increase in the campus's endowment. We also expect the SUNY IMPACT Foundation program, which allows donors to direct gifts to the SUNY campus of their choice gaining significant state and federal tax breaks, to be renewed. In 2023 Binghamton secured $2.2 million from this program – the highest among all SUNY campuses.

BCC & Binghamton Advantage

Binghamton University expanded its Binghamton Advantage Program (BAP) in 2023. In the BAP program, select students who had applied to Binghamton reside in dorms on Binghamton's main campus with the incoming first year class, but take classes at BCC. Students in the program receive automatic admission to Binghamton upon earning a GPA of 3.0 or higher in their first year. BAP is on track to enroll more students this year than last year. As of this writing, there are 240 deposits for BAP as compared to 187 last year at this time. We expect actual enrollment to increase from 174 last year to around 227 this year for an increase of over 50 students.

This spring, Binghamton initiated a new program Broome to Binghamton (B2B). This program is similar to BAP, except that the enrolled students live either at home or in dorms on the BCC campus. The new program is on track to enroll 20 to 25 students this year. Although very new, the program has been well received by local schools and we anticipate it will expand significantly next year as more information has been shared. Both BAP and B2B benefit both institutions by helping boost enrollments at BCC, while creating a robust transfer pool for Binghamton, which is valuable to us in light of declining transfer applications.

Incentives for Graduate Enrollment Growth

The university has had in place incentives for graduate enrollment growth for four years now. The incentives are based on an enrollment revenue target for each college and school which is equal to the average of actual graduate revenues from the past three academic years for the unit. If a college or school met its target the previous year, and does not have a cumulative prior year's deficit, then it keeps 100% of the revenues above the current target as incentive funds.[6] It is important to note that until this year these have been one-time funds, which are not added to the unit's base budget. If enrollments grow over time, this gradually raises the corresponding college or school's enrollment target. If a college or school does not meet its target, however, then the unit does not receive any incentive funds and the amount below its target must be paid off in subsequent years. We can think of this as the college having a cumulative deficit *vis a vis* the administration. If a school meets its target in the current year, but is in a deficit situation with the administration, then they keep 60% of the amount above the target and must pay down its existing debt with the remaining 40%. On the

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[6] The School of Pharmacy (SOPPS) is not a part of the incentive program at this point.

other hand, if actual enrollment revenue is declining over time, then this correspondingly pushes down the three-year average making it easier to hit the target in subsequent years.

As of this year, schools and colleges that exceeded their enrollment target now have the option to add 40% of the revenues over their current target to their base budget, but then the target for the following year becomes the actual amount from the current year rather than the three-year average.

Respectfully submitted,
Barry E. Jones, Chair, Faculty Senate Budget Review Committee

<u>Committee members</u>
Michael Buck
John Cordi, CFO
Anindya Debnath
Komla Dzigbede
Matthew Gallagher
Donald Hall, Provost
Norah Henry
Jonathan Krasno, FSEC Chair
Patrick Madden
Natalija Mijatovic, Faculty Senate Chair
Debi Mishra
Richard Naslund
Olga Shvetsova
Thomas Sinclair
Susan Strehle
Sandeep Vangapandu

Faculty Senate Bylaws Review Committee
<u>Annual Report 2022-2023</u>

This report is intended for review by the Faculty Senate of Binghamton University; it reports on activities of the Bylaws Review Committee during academic year 2021/22.

During AY 2022/3, the Bylaws Review Committee did not have any business brought to its attention. Consequently, the Committee did not convene or conduct business during that period.

Respectfully submitted,

Andrew Scholtz, Committee Chair

<u>Committee members</u>
Cassandra Bransford, past Vice-Chair of Faculty Senate
Jeremy Dibbell, Libraries
Stephen Levy, Physics
Pamela Mischen, president's appointee, ex-officio
Sara Reiter, School of Management
Andrew Scholtz, Classical & Near Eastern Studies (committee chair)
Olga Shvetsova, Political Science
Melissa Zinkin, past Vice-Chair of Faculty Senate
VACANT, provost's appointee, ex-officio

Please submit the report via email to Kellie Hovancik at khovanci@binghamton.edu.
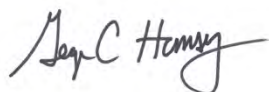
Faculty Senate – Committee on the University Environment
Annual Report 2022-2023

The Committee on the University Environment (CUE) is charged with providing recommendations and oversight of any aspect of the campus that impacts the quality of the environment.

We met on October 13, 2022 via Zoom to discuss the following items.

1. We met the interim director of construction and long-term planning, Lisa Sklener. She presented two plans for us.

    a. **Baseball Phase 2.** We are building a new indoor facility for multiple sports to use adjacent to the new Baseball Stadium. The only vegetation we are removing are around the pavilion which will be demolished and the planters between the courts. Trees along the Bunn Hill access road are scheduled to remain. Several new trees will be planted along the walks and much of the space will be open green space."

    b. **Roof Replacement of and Plaza Deck Replacement near the Tech Hub.** The projects will take three to five years and will require removal of various trees behind the hub for both roof access and as a stating area.

2. **Bird – Window Collisions.** Julian Shephard and Anne Clark have compiled a database of where dead birds have been found. They are working with Facilities on a pilot project to add visual cues to large swaths of glass on one of the science buildings to see if the collisions are reduced. A student in the Sustainable Communities master's degree student also examined this issue. (Subsequently, one of his conclusions this spring is that the placement of fruit trees should also be examined.)

3. **Sustainability Committee**. Finally, we had a brief report on the new Sustainability Committee. (We subsequently learned that this committee, appointed by President Stenger, would be headed by Dr. Pamela Mischen, the university's new sustainability officer.) We need to find avenues of collaboration with this committee.

Respectfully submitted,

George C. Homsy, Committee Chair

Committee members

Aaron Berkowitz, Undergraduate student	Kim Jaussi, Provost's appointee
Jeremy Boyle, PSS representative	Carl Lipo, Harpur / Social Sciences
Nick Corcoran, Landscape Architect, Physical Facilities	Colin Lyons, Harpur / Fine Arts
Alex Corsello, Undergraduate student	JoAnn Navarro, VP for Operatins
Joseph Graney, Harpur / Natural Sciences	James Pitarresi, Provost's appointee
George Homsy, Provost's appointee	Ryan Roosa, Residential Life representative
Dylan Horvath, Steward of the Nature Preserve	Blythe Roveland-Brenton, University Libraries
	Julian Shepherd, Harpur / Natural Sciences

Tanya Husick, Director of Transportation and Parking, Ex-officio member
Jonathan Reynolds, Groundskeeper, Physical Facilities, Ex-officio member

Faculty Senate Committee on Committees
Annual Report 2022-2023

Committee on Committees 2022/2023 Annual Report

The ConC did not meet until May 2023 to work on the 2023/2024 committee rosters. The current chair was brought in to chair the committee in April of 2023 and since the committee did not meet prior to that we are unable to report on how things progressed earlier in the year.

Respectfully submitted,

Neyda Gilman, Committee Chair

Committee members (as of May 2023)
Ann Fronczek
Leslie Lander
Sabine Perrino

Faculty Senate Convocations Committee
<u>Annual Report 2022-2023</u>

The committee used its charge as the major guide for funding decisions: bringing programs to campus that "enhance and support the intellectual, cultural, and artistic aspects of the academic curriculum" and to focus our efforts toward as diverse a university community as possible. The committee traditionally has not funded events that did not fit the criteria above or requests for food, receptions, or parties. Publicity, speakers' fees, or transportation are items that were specifically funded. In addition, events that cater to a variety of groups on campus in general, and undergraduate students in particular, were looked upon favorably by the committee.

The convocations committee is normally comprised of 4 faculty members, 2 administrative members, 3 Student Association representatives, and a Graduate Student Organization representative. The committee primarily reviewed and discussed applications via email. Final decisions are made through voting by the committee members. In a great majority of cases, decisions are unanimous.

The Convocations Committee reviewed a total of 14 applications throughout the year and supported 9 events in total. One event, the Student Association Student Activism Art Mural, is postponed until next academic year. Allocations ranged from a minimum of $500 to a maximum of $2000.

A detailed documentation of funding allocation is presented below:

Event	Amount
Caribbean Student Association Carnival	$500.00
Society of Asian Scientists and Engineers Exchange	$500.00
Black Student Union Black History Month Keynote	$2000.00
Chinese American Student Union China Night	$500.00
Quimbamba El Polvorin Festival	$1900.00
Shabbat 2000	$500.00
Rena Magazine Fabric of Reality	$860.00
Hindu Student Council Holi	$1000.00
Student Association Student Activism Art Mural	$1000.00
Total	**$8760.00**

Respectfully submitted,

Aleshia Huber, Committee Co-Chair
Jennifer Keegin, Committee Co-Chair

<u>Committee members</u>
Rosa Darling

Suzanne McLeod
Donald Loewen
Brain Rose
Atira Peterson
Daniel Rocabado
Kayleigh McGeeney
Eitan Weinsteiner

Please submit the report via email to Kellie Hovancik at khovanci@binghamton.edu.

Annual Report - Faculty Senate Diversity Committee
Elizabeth Brown (chair)
Members:
Sandra Casanova-Vizcaino
Claudia Marques
Sara Reiter
Erica Juarez
Andre Mathis

Annual Activities of the committee included:

- Reviewed the Diversity plan for the proposal for the School of the Arts and shared concerns with the full Faculty Senate at the presentation of the proposal at the meeting on Nov 1, 2022.
  Concerns include:
  1. The consensus of the committee is that the scope and language of the Diversity and Inclusion section is incomplete and is lacking in scope to proactively address diversity and equity issues.
  2. The statement focuses on diversity in the curriculum and diversity in faculty. Diversity of the student body or concrete plans or initiatives to promote more diversity of faculty, staff and students in the Fine Arts is not mentioned in the section.
  3. The section could be enhanced by adding information on specific programs such as mentoring, visiting speaker series, and data trends on the admissions or graduation data by race/ethnicity within the student body.
  4. The section can also address the role of the School as leading diversity and inclusion efforts, rather than assuming this is being taken care of at the departmental level.
  5. Editing charts for more inclusivity, such as using Race/Ethnicity or Latin/LatinX in addition to Hispanic, would enhance the report.

  As of this date, no follow-up has happened with amending the diversity section. The incoming committee chair may want to inquire about updating the diversity statement.

- Reviewed proposed language changes to the Faculty Senate By-laws in the spring 2023. As of this date, no recommendations to the changes have been suggested. The 2023-24 Faculty Senate Diversity Committee Chair may want to review with next year's committee members in case there are any concerns with language, and suggest any changes to the chair of the Faculty Senate Executive Committee.

Faculty Senate EOP Advisory Committee
<u>Annual Report 2022-2023</u>

The EOP Advisory Council met in the fall semester and identified two action items for the year. The first was to create a list of talking points to share with departmental faculty explaining what the EOP program is, why it is important and how departments can best support the program. Two questions emerged in this process: What do faculty members need to know? and, What activities are currently underway in departments that specifically support EOP? A document outlining core information including how EOP is funded, what the nature of the program is, the program's history, how it supports students, what the BEP (Binghamton Enrichment Program) is, and what the biggest challenges faced by EOP students are was drafted and is currently ready for discussion and revision within the group.

Out of this exercise, the committee also identified the need to proactively solicit faculty participation in their summer program. This invitation to faculty to propose new classes, and to teach existing classes is still in development; however, the Libraries Digital Scholarship in partnership with Binghamton Codes! has proposed and is offering a new course in the summer 2024. The course is entitled Foundations of Digital Literacy.

The Council will be seeking new leadership in 2024/25, as one of the current co-chairs, Nancy Abashian, is stepping down after 7 years of service.

Respectfully submitted,

Nancy Abashian & Denise Yull, Committee Co-Chairs

<u>Committee members</u>
Nichole Rouhana
Lisa Tessman
Robin Cope
Nia Johnson
Yaseen Anderson
Nya Greene
Stacy-Ann Gordon
Mariah Bubel
David Clark
Karima Legette
Justin Brymn
Sara Wozniak

Faculty Senate Evaluation Coordinating Committee
Annual Report 2022-2023

The Evaluation Coordinating Committee (ECC) of the Faculty Senate for 2022-2023, provided by the Committee on Committees consisted of:

Committee members (see Procedural Note below)
Jane Bear-Lehman (Decker)
Aaron Beedle (SOPPS)
Megan Benson (Libraries)
Subimal Chatterjee (SOM)
Madhusudhan Govindaraju (Watson - Informational Education and Global Affairs)
Tarek Shamma (Harper – Comparative Literature, TRIP)
Michelle Withers (Harpur - Biological Sciences)
Sarah Young (CCPA)

The ECC met on November 8, 2022, by Zoom. Bear-Lehman, Beedle, Benson, Chatterjee, Govindaraju, Withers, and Young were in attendance; Shamma was absent. At this meeting:
1) Aaron Beedle (Pharmaceutical Sciences) was elected as committee chair for the year;
2) the committee received its charge to evaluate three senior administration officials for the 2022-2023 academic year, Vice President for Research Bahgat Sammakia (Fall 2022), Dean of the Decker College of Nursing and Health Sciences Mario Ortiz (Spring 2023), and Vice Provost for Online and Innovation Education and Executive Director for the Center for Learning and Teaching James Pitarresi (Spring 2023);
3) the committee deliberated on an approach to complete the evaluation process.

In November of 2022, the ECC Chair requested evaluation documents from Vice President Sammakia, and the committee reviewed and edited questions for the campus survey. The Sammakia survey and supporting documents were distributed to faculty and staff on December 1, 2022, by the Secretary to the Faculty Senate.

In February of 2023, the ECC Chair requested evaluation documents from Dean Ortiz and from Vice Provost Pitarresi. The remaining ECC committee members reviewed and edited items for the campus questionnaires to evaluate Ortiz and Pitaressi. On Friday April 21, 2023, the Secretary to the Faculty Senate distributed the Ortiz electronic survey and accompanying documents by email to faculty and staff and the Pitarresi electronic survey and accompanying documents were similarly distributed on Thursday April 27, 2023.

Questionnaire results were obtained as Qualtrics reports on May 31, 2023, as the complete report (all responses), the faculty-only report, and the non-faculty (staff and administrators) report for each evaluation.

In June of 2023, survey responses were tabulated and analyzed. Draft reports were shared with the original eligible ECC members and three additional faculty senators to assist with review of the reports: Vladimir Nikulin, Watson; Harald Zils, Harpur – German Studies; Jonathan Krasno, Harpur – Political Science (see procedural note below). The reports were finalized by the committee and the official ECC evaluation reports were distributed on June 16, 2023, as follows:

Sammakia report: Distributed to Vice President for Research Bahgat Sammakia (Evaluee), President Harvey Stenger (Evaluee direct report), and the Faculty Senate Executive Committee Chair (Jon Krasno).

Ortiz report: Distributed to Dean of the Decker College of Nursing and Health Sciences Mario Ortiz (Evaluee), Executive Vice President for Academic Affairs and Provost Donald Hall (Evaluee direct report), and the Faculty Senate Executive Committee Chair (Jon Krasno).

Pitarresi report: Distributed to Vice Provost for Online and Innovation Education and Executive Director for the Center for Learning and Teaching James Pitarresi (Evaluee), Executive Vice President for Academic Affairs and Provost Donald Hall (Evaluee direct report), and the Faculty Senate Executive Committee Chair (Jon Krasno).

In addition to these activities, the Secretary of the Faculty Senate, in collaboration with the ECC Chair, updated and reviewed the executive personnel and schedule of ECC reviews.

Procedural Note: After the November 2022 ECC meeting, it was noted that according to faculty senate bylaws, the ECC must be composed of current faculty senators. Per this requirement, ECC 2022-2023 members Chatterjee, Govindaraju, Shamma, and Withers were not eligible to serve. Therefore, these faculty were excused from further service. In consultation with the chairs of the Faculty Senate and the Faculty Senate Executive Committee, it was determined that the ECC Chair could invite additional 2022-2023 faculty senators to help to fill vacant ECC positions. These three added ECC members contributed to the review and final ECC evaluations reports in June 2023.

The Evaluation Coordinating Committee submits these activities as our work product for the 2022-2023 academic year.

Respectfully submitted,

Aaron Beedle (SOPPS), Committee Chair

Committee members
Jane Bear-Lehman (Decker)
Megan Benson (Libraries)
Jonathan Krasno (Harpur), additional member
Vladimir Nikulin (Watson), additional member
Sarah Young (CCPA)
Harald Zils (Harpur), additional member

Please submit the report via email to Kellie Hovancik at khovanci@binghamton.edu.

BINGHAMTON
U N I V E R S I T Y
STATE UNIVERSITY OF NEW YORK

Office of the President

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Binghamton, New York 13902-6000
607-777-2131, Fax: 607-777-2533

July 12, 2023

President Stenger,

For the academic year 2022-2023, the Intercollegiate Athletic Board met twice, once in the fall of 2022, on November 17 and once again in the spring of 2023, on May 10.

During the fall meeting, Interim Athletics Director Dennis Kalina provided the committee with highlights from the Athletics department's previous spring season and through November in the fall semester.

Athletics accomplishments included the Bearcat Baseball team winning the America East Tournament the previous season and making it to the Regionals in Palo Alto. Women's Soccer team ended the 2022 season as regular season champions, as did the Women's Volleyball Team, which was a first in Binghamton Athletics 21-year history in the America East.

The fall semester also saw many academic successes including a 3.42 overall GPA for all athletes. 33 student athletes reached a perfect 4.0. Additionally, Binghamton recorded its highest NCAA Academic Progress Rating (APR) ever.

Interim AD Kalina also provided updates on a number of improvements at Bearcats facilities including the new fieldhouse, upgrades to the softball stadium, as well as all of the upgrades taking place at the new Lane-Stark Tennis Center.

Additionally, AD Kalina talked about improvements in mental health supports for athletes including embedding a University Care Center Counselor to allow for easier and more confidential access for students.

At the spring 2023 meeting, it was new AD Eugene (Gene) Marshall's opportunity to talk about his vision for the Bearcats Athletics Department. AD Marshall started his position in January. During his first few months on campus, AD Marshall indicated he spent quite a bit of time getting to know the campus as well the people. AD Marshall outlined a number of reorganization efforts and programmatic changes he has already implemented as well as items he was hoping to accomplish in the near future, including:

- Changing the culture where everyone connected to Athletics has a "winning" attitude.
- Working on policies and legislation that will allow Athletics' staff to assist students with understanding and managing Name, Image, Likeness (NIL) arrangements.
- Create a better inventory process to make sure the program manages all uniforms/supplies in a systematic way.
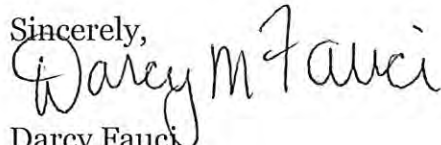
- Looking at ways to better promote our brand and step up our marketing efforts to the community more aggressively and creatively including moving our games earlier so more students and staff will more likely attend.
- Helping/supporting our students more with their academic responsibilities.
- Working with Academic Affairs/Admissions so that recruits can get a more rapid response on their admissions status.
- Continuing to work on bringing men's ice hockey and women's field hockey programs to campus.
- Moving the golf team to a conference that is closer to home and men's and women's tennis teams will also realign with that same conference—the Northeast Conference.
- Upgrading a number of Athletics' facilities. Work will be taking place over the summer and throughout the year on a number of sites including the softball stadium, the new fieldhouse and a new wrestling improvement project in the West Gym.
- All coaches will begin filling out and tracking their teams progress as well as needs and challenges.
- Finally, Athletics will be focusing on new NCAA requirements that require institutions to provide support and services that provide a whole-body, holistic approach to the student athlete's well-being. The University will also have to provide reports on its progress in meeting these requirements to the NCAA.

AD Marshall also highlighted another Bearcats accomplishment in the past year—the fact that Binghamton is very close to clinching the AE Commissioner's Cup. He added that Binghamton has been able to get to the top without winning any Conference championships. He reported that all of the teams have simply performed so well across the board, that Binghamton earned enough points to be in this position. At the time of the meeting, we had to wait for two sports to wrap up their seasons. (Ultimately, we learned we did indeed win the Cup!) Updates on all of our teams' successes were provided.

Following AD Marshall's report, Assistant Provost and Associate Director of Athletics David Eagan provided the academic report for the fall 2022 semester that showed that overall Binghamton teams reached a 3.39 GPA. All 21 sports teams had a GPA above 3.0. Dave highlighted a few more details included in the academic report: 338 student athletes earned above a 3.0 and 212 earned above a 3.5 GPA. Additionally, 48 students earned a perfect 4.0 in the spring of 2022.

Eagan also reported on our recent NCAA audit. He explained that every 9-10 years the NCAA does a full audit of an institution. Our last audit was in 2014. The most recent audit was a thorough review and the final report found no major issues.

These are the highlights from the IAB activity in the 2022-2023 year. As always, let me know if there are any questions or concerns.

Sincerely,

Darcy Fauci
IAB Chair

Faculty Senate ITS Research Computing Advisory Committee
<u>Annual Report 2022-2023</u>

During academic year 2022-2023 the committee staff conducted extensive work.

The first component was a pilot study for providing secure digital storage to support research activities. It was a very successful pilot. The full report for the pilot is attached to this report as Appendix 1.

The second component was a proposal for additional resource development in the near future. That proposal is attached to this report as Appendix 2.

The committee met on April 26, 2023, after the pilot study is completed and results were available. Both the results of the pilot study and the 2023 proposal was discussed at length in the meeting.

The attached meeting minutes detail the committee deliberations. Overall, the committee was interested in the results of the pilot study and the proposal and endorsed both.

Respectfully submitted,

Niyazi Bodur, Ken Chiu, Committee Co-Chairs

<u>Committee members</u>
Yu Chen
Blazo Kovacevic
David Schuster
Yetrib Hathout
Chang Hee Park
Jonah Thomas
Pradeep Kumar Ramesh
Tim Costesi
Nick Walling

Please submit report via email to Kellie Hovancik at <u>khovanci@binghamton.edu</u>.

2022 - 2023 ITS Research Computing Advisory Committee Meeting Minutes

Meetings

April 26, 2023

Attendance:
- Yetrib Hathout - Pharmacy
- Blazo K. - Art & Design
- David Schuster - Library
- Tim Cortesi - ITS
- Kenneth Chiu - CS Department
- Yu Chen - Electrical and Computer Engineering
- Chang Hee Park - SOM
- Niyazi B. - ITS
- Nick Walling - ITS

Topics of Discussion:
- Discussion of Researcher Needs:
    - Jupyter Hub, RStudio, Google Collab
    - Storage for mass spectrometer data
    - Storage for fMRI data
    - High Performance Sequencing
- Discussion of Fine Arts Faculty Needs:
    - Adobe Creative Cloud
    - High Resolution, High Quality Displays
    - Virtual Reality Headsets
- Discission of Library Efforts:
    - Ithaka S&R – 2 year discovery effort / project
- Review of the ITS Research Data Storage Pilot Effort (CEPH Cluster):
    - Ideas for measuring and improving performance of the cluster
    - Ideas for backup and long term storage
    - Merits of encrypted vs unencrypted storage
    - The committee confirmed that the pilot effort made sense, and the data storage offerings as outlined in the pilot should be exposed as production services
- Review of ITS Proposed Preliminary Computational Infrastructure
    - Committee confirmed that the ITS approach is valid and should proceed as outlined

Efforts

- ITS Built and Piloted an ITS Research Data Storage cluster
    - Successfully moved that cluster into an operational capacity
    - Working on expansion of the Research Data Storage cluster
- ITS Developing Computational Infrastructure based around the 2019 DSI Initiative:
    - Virtual Machines as a Service
    - Virtual Desktops as a Service
    - High Performance Computing as a Service
    - Storage as a Service
- Library Led Ithaka S&R Project

Appendix 1

Final Report - Research Storage Pilot

[Nicholas Walling](#) nwalling@binghamton.edu

Last Revision: Feb 17, 2023

This report describes project results, successes, and lessons learned from the ITS Research Storage Pilot.

The end of this report contains recommendations for the future of ITS Research Storage.

Revisions:

Feb 17, 2023
- Added [Appendix B: List of Users](#)

Table of Contents

Project Results

Table 1: Project Goals and Results

Project Goal	Project Result
Design a storage solution to **reduce ITS yearly price per TB from $1000 to $100**.	Designed a scalable low-cost file storage solution - with an **estimated yearly cost of $73.56 per TB***. At this price-point, the solution reduces the price per TB by 92.6% compared to the current ITS storage solution. [1]
Implement a pilot version of the storage solution	Implemented a pilot of the storage solution based on the initial design. This solution runs open-source Ceph software with data distributed across 4 servers making it tolerant to both server and hard drive failures. Storage is accessible to faculty/staff on campus or via VPN to Windows, Mac, and Linux devices using SMB/CIFS protocol through the open-source Samba file sharing software.
Advertise and provide no-cost access for researchers to test the viability of the storage solution	Advertised the pilot service on the Binghamton.edu website [2]. Provided a TeamDynamix [3] service request to apply for no-cost access to storage. Four users started using the service Nov. 14th, 2022. As of the end of the pilot (01/31/2023) there are thirteen users across 7 projects

**Assumes 3 copies of data stored, no backup solution, and a lifespan of 5 years for the servers and hard drives. Cost only includes the price of servers and hard drives.*

Criteria for Success

Five metrics for success were described in the Pilot Project Charter [4].

Metrics for success
1. Initially sign up at least 3 users at Pilot launch
2. At least 10 users signed up by January 31st 2023
3. Most users (over 75%) indicate that they are satisfied or highly satisfied with the service
4. Most users (over 75%) indicate they would like this service to continue existing
5. Over 90% service uptime

Four of the defined metrics were met. Metric 3 - user satisfaction - was not met.Further discussion on Metric 3 can be found below in the "Lessons Learned" section.

Table 2: Evaluation of criterias for success

Data for these metrics is from Appendix A as well as the results of the feedback survey [5]

Success Criteria	Criteria Met	Comments
1. Initially sign up at least 3 users at Pilot launch	●	**Met Expectations** Initially signed up 4 users, for a total of 3 research projects
2. At least 10 users signed up by January 31st 2023	●	**Met Expectations** As of 01/31/2023, there are 13 Users, across 7 projects - 7 Faculty/Staff Users - 6 Student Users
3. Most users (>75%) indicate that they are satisfied or highly satisfied with the service	●	**Needs Improvement** Only four out of seven (57%) surveyed users indicated they were satisfied or very satisfied. The remaining three out of seven (43%) gave neutral ratings. The average satisfaction rate was 75.7%
4. Most users (>75%) indicate they would like this service to continue existing	●	**Met Expectations** 100% of users indicated they would like to see future investment to operate and upgrade the service
5. > 90% service uptime	●	**Met Expectations** The Research Storage has had 100% uptime since it first began being used on November 14th

Discussion

Successes

Users

Four users began using ITS Research Storage November 14th, 2022. These users expressed interest after an advertisement was sent to the mailing list for the Human Subjects Institutional Review Board. Faculty and staff who collect Human Subjects research were ideal users as this type of data generally requires extra security layers such as data encryption and access control - which is provided by the ITS Research Storage.

Minimal advertisement was made after this, with most future users reaching out organically. Many of the new users are faculty members within the same departments as the initial users (Psychology and Biomedical Engineering).
This makes it appear that word of mouth is the main way that new users began using the research storage.

The sustained growth of about 1 new user per week with only one initial advertising email has been impressive.

Service Uptime Despite Hardware Failure

After starting the pilot, one of the four storage servers would fail every couple weeks. The failure was that every disk in the server besides the two disks containing the Operating System would disappear - the server no longer recognized or saw the disks.
After a reboot of the server it would come back up and begin functioning normally for another couple weeks until it would fail again. Every time the server failed there were no issues with the Ceph cluster - no data was lost, any data on the failing server would be automatically replicated to one of the other servers.

Towards the end of December, after several attempts to diagnose the problem, the Research Computing Team decided to wipe the failing server and do a clean install of the Operating System and Software. After updating the firmware and attempting to boot, the same issue of the disks not appearing occurred, but this time a system reboot did not fix the problem.

The server was purchased from Red Barn Technology Group in Binghamton. A ticket was opened with Red Barn on Thursday January 5th to address the issue - which appeared to be a hardware problem at this point. On Thursday January 26th Red Barn sent two technicians to diagnose the server. Nicholas Walling oversaw access to the server. The technicians identified a hardware issue with the power to the backplane - one of the power pins was visibly broken and no power was getting to the backplane which contained the hard drives. The technicians took the server for repairs. Current status of the server is awaiting repairs.

Despite full failure of one of the servers, Ceph was able to provide 100% uptime to the Research Storage Service since it first began being used on November 14th.

Lessons Learned

User Satisfaction

Users were asked on a scale from 1 (Not Satisfied) to 10 (Very Satisfied) how satisfied they were with ITS Research Storage overall. The following responses were received:

Table 3: User satisfaction rating with comment if available

Satisfaction Rating	Comment (Optional)
4/10	It will be very helpful if I can control who has access and what other users can do with the storage. I use it for the whole lab so that this function will be critical.
5/10	Data transfer is a little slow. Can that be improved?
6/10	Cumbersome to authorize users. Setting up folder level projects and passwords needs support. This storage is an essential resource and should be supported.
8/10	It is a little bit slow
10/10	
10/10	
10/10	

Two of the major complaints were data transfer speed, and access control.

Data Transfer Speed

While testing transfer speeds, on-campus wired connections on both Mac and Windows laptops were satisfactory.

Wi-fi transfer of data can be extremely slow (in one test over 10X slower than the wired speed), so it is recommended that users use a wired connection. It is unclear whether the users who left comments used a wired or wireless connection.

Data transfer speed could be improved in the future from a hardware perspective. We currently use HDD drives that are accelerated with a small amount of SSD storage. In the future, creating an all SSD storage tier could improve speeds and increase user satisfaction

Access Control

Currently, access control is managed completely by ITS. Several users have requested the ability to add/remove access to students and faculty from other universities over the past few months. This has been the most requested feature - as well as the most common complaint.

The management of access control of ITS was by design - based on the current model ITS uses for research shares in Bushare. One reason this model was selected was to limit the researchers ability to accidentally or purposefully remove ITS access to file/folders. Another reason is to limit the ability of researchers to accidentally expose their data to someone who should not have access.

Access control is something that needs to be discussed more and a solution implemented. Allowing researchers to manage their own user access would increase user satisfaction and reduce tedious manual work for ITS staff. Currently, researchers store tons of data in Google Drive - where they are already responsible for making sure unwanted access does not occur - so adding the similar access control policies that Google Drive has to the Research Storage would not be much different from the status quo.

User Satisfaction - Conclusions

Having a good user experience is important for researchers to continue to use the Research Storage service, and not seek out alternatives.

There are steps that can be taken to improve both transfer speed and access control in reasonable ways that will make the overall service better.

Recommendations for Next Steps

1 - Expansion

Additional Storage Capacity

The Research Storage cluster has 110TB of usable storage total. 12 / 110 TB are currently being used at the end of the pilot.

Future Storage Needs
- The pilot had only one advertising email sent out to get initial users. If ITS spends more effort to advertise the service, we will have more requests for storage coming in per week. During the pilot there was an average of 1 request per week.
- There is at least 30TB of research storage sitting on BUShare. With the new Google Drive limits, we are finding several users with over 2TB of research data. The Research Computing team has been contacted by Google Drive users with a combined 10TB of research data they are looking to move out of Google Drive. Moving all of the known research data onto the research storage cluster would be at minimum 40TB - bringing the total used storage to 52 TB. In reality, this number will be larger as more users from Google Drive reach out for alternative options.

Campus-Wide Use
This service has not had a campus-wide announcement. To be prepared for campus-wide use we will need to have more storage available. Lead times for getting quotes, having hardware delivered and installed could take a couple months, so need proactively begin ordering before any campus-wide announcement

Data Backup

Each week, more research data is being put into research storage. There is the potential to move all the known research storage at ITS, from Google Drive and BUShare, into the research storage. It would be in the interest of ITS to have a solution in place to backup this research data - or at least have the option to. Worst case is the entire cluster failure losing all of the data and not being recoverable. Having a backup in place helps us to prepare for that worse case scenario.

Archival Storage

Not all research data is active, and active research data will eventually be inactive. We can set up archival storage as part of the Ceph cluster, which can be directly to cheap HDD storage. This archival storage would be cheaper, have slower access time, and we could save on storage space by having less redundancy. Currently we store 3 copies of the data, for archival storage we could store 1 copy, then have that copy setup to a backup solution.

2 - Upgrades

Update Data Storage Mechanism

Ceph provides two storage mechanisms: replicated and erasure coded data pools. We are currently using replicated data pools for storage. By changing from replicated to erasure coded pools, we can increase the amount of usable storage by 50% (from 110TB to 165TB)

Samba

Currently Samba, the service that provides users access to the storage, runs on one physical server. This server is nearing end-of-life and is underprovisioned for the task. Moving this server into the VMWare environment will allow us to provision more resources for this. Notably, having two Virtual Machines running Samba in a clustered configuration is a major improvement to the current setup - which is a single-point of failure.

Access Control (Only BU Users)

Access control - as discussed in the [Discussion - Access Control](#) section - was a complaint among users. They want more control over adding and removing access to files and folders - similar to what Google Drive does. Future steps involve looking into setting up NextCloud - which is open-source Google Drive. If users can access the storage through NextCloud, they will be able to manage permissions similar to Google Drive.

Access Control (Non-BU Users)

Currently non-BU user access is not available. This is something that has been requested from users of the storage. Giving non-BU users access to BU resources is a larger issue that should be discussed - involving IAM, VPNs, and Active Directory permissions. I believe the Enterprise Systems, Innovation, and Networking Team are taking some steps towards a solution.

Data Transfer Speed

More research needs to be done on why users are complaining about data transfer speed. This could be because they are using wireless connections, or slower wired connections. It could also be that the storage hard drives are the limiting factor. If it is identified that the current HDD setup is not satisfactory, we can look into adding a tier of SSD storage to improve performance. Ceph supports this idea of tiered storage out of the box.

3 - Chargebacks

While ITS can front the cost of initially setting up a small storage cluster - ultimately the long-term sustainability of the cluster will be from other sources of money. One source of this is a chargeback model that will allow ITS to recuperate costs.

Further discussion on chargebacks or other sources of funding for the storage should be had.

References

[1] Storage Cost Comparisons

[2] ITS Data Storage Website. Encrypted Data Storage | Information Technology Services | Binghamton University

[3] TeamDynamix Service for Research Storage. Service - Research Storage

[4] Research Storage Pilot - Fall/Winter 2022

[5] Qualtrics Feedback Survey Results.pdf

Appendix A: Statistics

As of 01/31/2023:

Usage

- 8 Requests for Research Shares
  - 7 Shares Created
  - 1 Share Request Awaiting User Action
- 13 Current Users
  - 7 Faculty/Staff Users
  - 6 Student Users
- 12.315 TB / 110 TB (~11%) of Available Storage Used
- 4 Users at Launch, 3 Shares Total Created at Launch
- 4 out of the 7 Created Shares were given 3TB of storage - which is the maximum amount allowed during the pilot

Service

- 100% Service Uptime

User Feedback Survey (See Appendix B for Survey Document)

A User Survey was sent out twice to Research Storage Users. The 4 question survey received 7 responses
- **Q1: Overall, how satisfied are you with ITS Research Storage?**
  - *75.7% Average Satisfaction Rate*
  - *4/7 Users indicated a satisfaction rating >= 8*
  -
  - Ratings:
    - 4/10
    - 5/10
    - 6/10
    - 8/10
    - 10/10
    - 10/10
    - 10/10
- **Q2: How likely are you to recommend ITS Research Storage to a friend or colleague?**
  - *84.3% Average Recommendation Rate*
  - *6/7 Users indicated a satisfaction rating >= 7*

- ○ Ratings:
  - ■ 6/10
  - ■ 7/10
  - ■ 8/10
  - ■ 8/10
  - ■ 10/10
  - ■ 10/10
  - ■ 10/10
- **Q3: Do you think ITS Research Storage deserves future investment to operate and improve the service?**
  - ○ 100% Answered Yes

- **Q10: Please Write Your Thoughts or Comments Here [Optional]**
  - ○ *Data transfer is a little slow. Can that be improved?*
  - ○ *It will be very helpful if I can control who has access and what other users can do with the storage. I use it for the whole lab so that this function will be critical.*
  - ○ *Cumbersome to authorize users. Setting up folder level projects and passwords needs support. This storage is an essential resource and should be supported.*
  - ○ *It is a little bit slow*

Appendix B: List of Users

Last Updated: Feb 17, 2023

Name	Email	Position	Faculty Sponsor	Department
Raymond Romanczyk	rromanc@binghamton.edu	Faculty	NA	Psychology
Jennifer Gillis Mattson	jmattson@binghamton.edu	Faculty	NA	Psychology
Eric Walsh	ewalsh@binghamton.edu	Staff	NA	Student Affairs Assessment Office
Kaiming Ye	kye@binghamton.edu	Faculty	NA	Biomedical Engineering
Gretchen Mahler	gmahler@binghamton.edu	Faculty	NA	Biomedical Engineering
Pong-Yu Huang	phuang@binghamton.edu	Faculty	NA	Biomedical Engineering
Fiona Sleight	fsleigh1@binghamton.edu	Student	Steven Lynn	Psychology
Haleema Qamar	hqamar1@binghamton.edu	Student	Gretchen Mahler	Biomedical Engineering
Lindsey Moon	lmoon1@binghamton.edu	Student	Katie Edwards	Pharmacy

Appendix 2

2023 Research Computing Project Proposal

[Nicholas Walling](#)
Last Revision: Feb 28, 2023

Document Purpose
Discuss projects that will be undertaken by the ITS Research Support Team in 2023. List
researcher needs. Discuss priority of needs.

Summary

The ITS Research Support Team will conduct three projects in 2023 to meet high-priority researcher needs. These needs have been identified as high priority based on the volume of researcher requests we receive, and by looking at services offered by other R1 Research Universities (Ex: Cornell, Princeton, SUNY Buffalo).

Project	Summary	Outputs (Deliverables)	Needs Met
Research Storage Phase 2	Upgrade and expansion of the pilot research storage service. These will enable the service to be offered to the entire campus, as well as add long term data storage support	- Archival Storage Service - Research Storage Service available to the entire campus - Upgrade existing and add new features to Research Storage Service - Increased amount of usable storage for the Research Storage Service - Backed Up	Storage for Active Research Projects Long Term Data Storage
Bingview for Researchers	Expansion of the Bingview environment to support researchers who need access to computational power and software that are not available on their personal computers	- Bingview for Researcher use - Persistent Desktops as a Service (Researchers pay for a persistent desktop)	Medium Level Compute (Workstation/Server) Access to Common Licensed Software
VMWare for Researchers	Expansion of the VMWare environment to support researchers who need access to virtual machines for running customized software, web applications, or databases	Virtual Machines as a service	Medium Level Compute (Workstation/Server) Access to Specialized Software

Project Timelines

Jan 1st	May 1st		Aug 30th	Dec 31st

Spring 2023 → Summer 2023 → Fall 2023

Research Storage

Bingview for Researchers

VMWare for Researchers
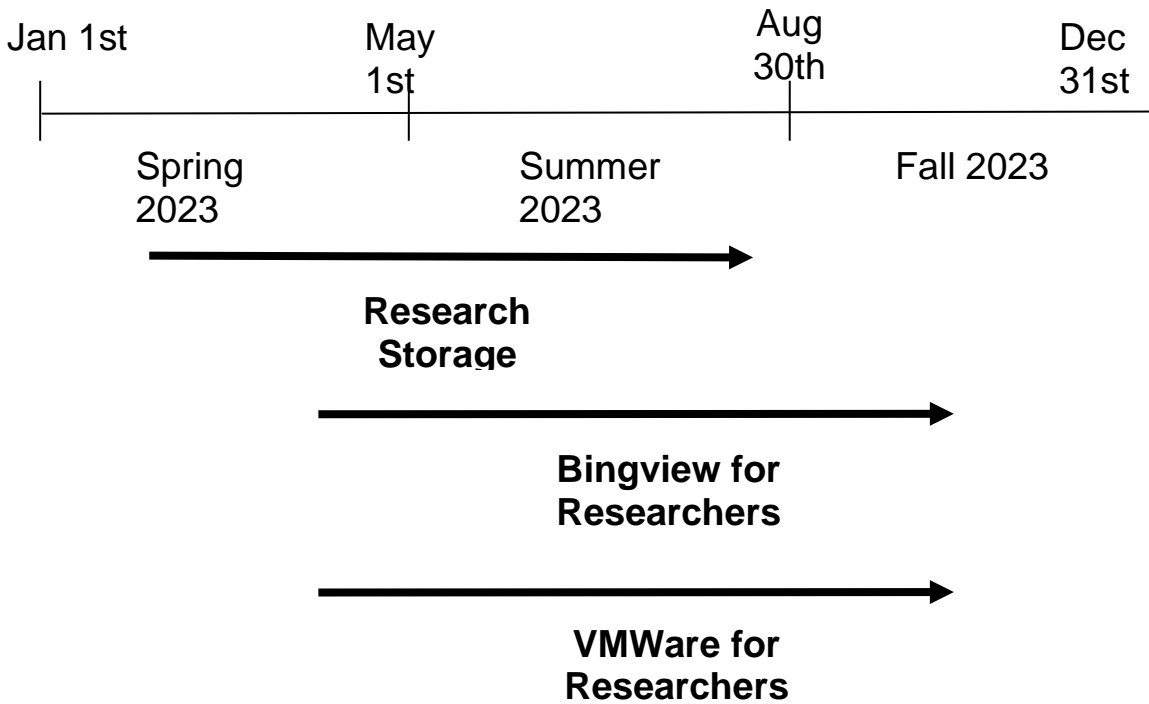
Research Storage: Early Spring 2023 - Late Summer 2023
Bingview for Researchers: Late Spring 2023 - Fall 2023
VMWare for Researchers: Late Spring 2023 - Fall 2023

Project Costs

All these costs are estimates. The Research Storage estimate is fairly accurate, the estimates for the other two projects are a wide range - these ranges will narrow as more discussions are had on what the scope of these projects actually are.

Project	One-Time Costs	Estimate of One Time Costs*	Ongoing Costs
Research Storage Phase 2	• Additional Servers • Additional Storage Capacity • Add Backup	$60k - 70k (not including cost of backups)	50% of a Full Time Employee (maintenance, and providing services to researchers)
Bingview for Researchers	• Additional Servers • Software Licensing	$75k - 150k	5-10% of a Full Time Employee (providing service to Researchers)
VMWare for Researchers	• Additional Servers • Software	$75k - 150k	5-10% of a Full Time Employee (providing service

	Licensing		to Researchers)
	Total One Time Costs	**$210k - 320k**	

End of Summary

Researcher Needs

Modern researchers require a variety of technologies to be successful.

I put some common technology needs of researchers into 5 categories:
- *Data Storage* - storing research data during an active project, and after it is done
- *Compute* - Access to CPUs, GPUs, RAM, and Cluster Computing
- *Software* - Access to both licensed and unlicensed programs
- *Publishing, Sharing, & Collaboration* - Making research papers and datasets available to the public, collaborators, or both
- *Secure Research* - Working with restricted-use data, requiring extra levels of security

Below is a list of these categories, along with the common needs within them.

This list is based on researcher requests at Binghamton University, as well as services offered by other R1 Universities - specifically Cornell, Princeton, and SUNY Buffalo.

Common Researcher Technology Needs

Category	Needs
Data Storage	- Storage for Active Projects - Long Term Data Storage - Computational Storage
Compute	- Low level compute (Laptop) - Medium Level Compute (Workstation/Server) - High Level Compute (Accelerated Servers, Clustered Computing)
Software	- Common Licensed Software - Specialized Software
Publishing, Sharing, & Collaboration	- Publishing papers in publicly available location - Publishing datasets in publicly available location - Sharing active research with non-BU collaborators - One-time transfers of data copies to collaborators

Secure Research	● Compliance with NIST 800-171 and similar standards ● Data use agreements

Description of Needs

Data Storage Needs

Need	Description	Example
Storage for Active Projects	Actively used for storing project data. Used for collaboration. **Length of Storage** *~1-2 years*	Research paper and datasets being stored in Google Drive so multiple students and faculty can collaborate
Long Term Data Storage	Generally used for storing data after a research project has concluded for re-use by other researchers. **Length of Storage** *More than 5 years*	Data use agreement states that data should be available for 5 years after the active research project concludes, so other researchers can access it
Computational Storage	Fast storage for compute tasks like running software or scripts. Includes SSD/NVME drives used in Laptops, Servers (Physical and Virtual), and Computing Clusters **Length of Storage** Temporary - days or weeks	Need to run an R script on a large dataset that requires fast data read and write times

Compute Needs

Need	Description	Example
Low level compute (Laptop)	Can perform all needed research on a laptop	Run small python script
Medium Level Compute (Workstation/Server)	Laptop is not good enough to perform needed research.	Analyze 15GB dataset with R script

	Requires a larger computer	
High Level Compute (Accelerated Servers, Clustered Computing)	Requires a computing cluster or high-performance server to perform needed research	Parallel MATLAB script (Parallel Computing)

Software Needs

Access to Common Licensed Software	Common software that needs paid licenses to use. Common means that many researchers from different departments are interested in these	MATLAB, STATA
Access to Specialized Licensed Software	Software that needs paid licenses to use. Specialized means either (1) a small amount of researchers from multiple departments will use this software OR (2) only one department is using this software	ArcGIS

Publishing, Sharing & Collaboration Needs

Need	Description	Example
Publish Papers	Publish research papers to publicly available locations. Papers are documents written to discuss, explain, and show research results	Binghamton University Open Repository
Share/Publish Datasets	Publish datasets to publicly available locations. Datasets are collections of raw or analyzed data	For small to large datasets, Princeton Dataspace For large datasets, Globus
Transfer Datasets	Send a copy of a datasets to other collaborators	For Large datasets, Globus

Secure Research Needs

Need	Description	Example
Research Environment in Compliance with NIST 800-171 and similar standards	Secure Compute, Storage, and Networking Environment that is NIST 800-171 Compliant	Princeton Citadel
Data Use Agreements	Process for helping researchers go through data use agreements, and if ITS can help meet those requirements	California Department of Public Health Data Use Agreement, Bureau of Labor Statistics Data Use Agreement

Solutions to Researcher Needs

Some of the common needs listed are being supported by ITS with both official and unofficial services. Some needs are being met by services from other departments at Binghamton University. Other needs are not being supported at all.

Needs Not Being Met Fully

Need	Current Solution	Why is the need not met fully?	Department
Storage for Active Projects	ITS Research Storage	Still in Pilot Phase	ITS
Long Term Data Storage	Google Drive	Long term storage should have some sort of data compression and use low-cost storage. Google Drive is too expensive for this purpose	ITS
Need	**Current Solution**	**Why is the need not met fully?**	**Department**
Medium Level Compute	Bingview	Bingview is not supposed to be used for Research	ITS

(Workstation/Server)		Purposes, but researchers tend to use it anyway and it does meet some of their needs	
Medium Level Compute (Workstation/Server)	VMWare Environment	Some researchers are using Virtual Machines in the VMWare environment. This is not an official service, but has met the needs of these researchers	ITS
Access to Common Licensed Software	Bingview	Bingview is not supposed to be used for Research Purposes	ITS
Access to Specialized Licensed Software	None	This involves obtaining and installing special software on a virtual server or desktop, then providing it to the researcher. Having a virtual application service or having the researcher be able to obtain a virtual machine could solve this.	
Share/Publish Datasets	Binghamton University Open Repository	Good for small datasets. Large datasets will need a dedicated system	Libraries
Transfer Datasets	None	Small datasets can be insecurely transferred using email. Larger datasets require a dedicated high-speed system of transfer	
Research Environment in Compliance with NIST 800-171 and similar standards	None		
Data Use Agreements	None		

Graph with priority of needs on one side and completeness of solution on the other?

Priority of Needs

There has been a clear demand for a few researcher needs in the past year. Many requests come in looking for places to store research data. We also have gotten several requests for access to virtual desktops or machines that labs can use to:
- Access common licensed software
- Perform computations that are not possible on their personal computers
- Shared storage space to collaborate with students and faculty in the lab

High Priority Unmet Needs (Based on Amount of Researcher Requests)
1. Storage for Active Projects
2. Long Term Data Storage
3. Medium Level Compute (Workstation/Server)
4. Access to Common Licensed Software

Medium Priority Unmet Needs (Based on Amount of Researcher Requests
1. Data Use Agreements

Low Priority Unmet Needs (Based on Amount of Researcher Requests)
1. Transfer Datasets
2. Share/Publish Datasets
3. Access to Specialized Licensed Software
4. Research Environment in Compliance with NIST 800-171 and similar standards

2023 Plan to Meet High Priority Needs

The ITS Research Computing Team proposes three projects to meet the four highest priority research needs.

Project: Research Storage Phase 2

Summary: Upgrades and expansion of the pilot research storage service. These will enable the service to be offered to the entire campus, as well as add long term storage support
Needs Met:
- Storage for Active Projects
- Long Term Data Storage

Project: Bingview for Researchers

Summary: Expansion of the Bingview environment to support researchers who need access to computational power and software that are not available on their personal computers

Needs Met:
- Medium Level Compute (Workstation/Server)
- Access to Common Licensed Software

Project: VMWare for Researchers

Summary: Expansion of the VMWare environment to support researchers who need access to virtual machines for running customized software or databases
Needs Met:
- Medium Level Compute (Workstation/Server)
- Access to Specialized Software

References

[1] [2023] Researcher Needs

Notes

As data sizes increase, researchers require more storage space.

Grant agencies such as the National Science Foundation are expecting data management plans [https://www.nsf.gov/bfa/dias/policy/dmp.jsp]

Summary

Three research services will be worked on in 2023

1. Research Storage
2. Virtual Desktops and Applications for Researcher Use
3. Virtual Machines as a Service

Research Storage

Virtual Desktops and Applications for Researcher Use

Feasibility
Other schools such as Princeton University provide this. Are there reasons why BU can't?

Virtual Machines as a Service

Feasibility
Is it feasible for ITS to provide this service? How much work will it require from ITS? I don't want people at ITS to be spending a ton of time managing VM's for others - this should be as self-service as possible with minimal support. More support available at cost? (Consulting?) Initial setup for free?

Faculty Senate Library Committee Report

The Faculty Senate Library Committee met on Tuesday, March 21 via zoom.

Committee members present: Rosa Darling, Jill Dixon, Pam Mischen, Joshua Reno, and Sara Young

The following items were discussed.

Interim Dean of Libraries Jill Dixon provided an overview of the recently finalized Libraries Strategic Plan (five-year plan) that is available on the Libraries' website at https://www.binghamton.edu/libraries/about/admin/strategic-planning/. She reviewed the three goals that focus on the collections, library services and organization. The plan also has new mission, vision and values statements.

Dean Dixon also provided background information on the Libraries' three main initiatives: Digital Scholarship (https://www.binghamton.edu/libraries/services/digital-scholarship/), Office of Inclusion, Diversity, Equity and Accessibility (IDEA - https://www.binghamton.edu/libraries/about/departments/idea/index.html), and Sustainability Hub (https://libraryguides.binghamton.edu/sustainability).

The Libraries have recruited 29 new positions in the past two years. The majority were replacement positions with nine new positions added. The FY22-23 library budget was fully restored from COVID reductions which allowed for acquisition of new collections materials, support for library initiatives, and new hires.

The Bartle Library 3rd Floor Renovation is proceeding well and on track for opening in early 2025. The space will include a new Digital Scholarship Center, collections, study spaces and a graduation commons. Renovation updates are provided here: https://www.binghamton.edu/libraries/about/admin/renovations/.

The new Libraries' Collection Management Facility is also on-track for completion. New high-density shelving will be installed in the spring and the move from the Annex in Conklin will begin in the summer. It is scheduled to be finalized by end of fall semester.

The Libraries' instruction librarians have been involved with implementing the new SUNY Gen Ed requirements for critical thinking and information literacy. An Information Literacy Toolkit

has been created to assist faculty and instructors with these areas – see
https://libraryguides.binghamton.edu/infolit.

Librarians and staff are involved with the Dean of Libraries search. Several are serving on the search committee, including Neyda Gilman as search co-chair. A briefing book will be prepared for the new dean.

Faculty Senate [Microcredential Committee - Joint]
<u>**Annual Report 2022-2023**</u>

The Micro-Credential (MC) Policy was adopted on May 12, 2020 and the Joint Micro-credential Committee Charge and Composition was adopted on September 29, 2020.

The charge of the MC committee is to:

1. To oversee the university-wide micro-credential policy.
2. To approve university-approved micro-credentials submitted by units.
   a. For credit-bearing micro-credentials, the committee will provide intermediate approval in between unit approval and Faculty Senate (undergraduate) or Graduate School (graduate) approval.
   b. For non-credit micro-credentials, the committee will provide final approval for microcredentials already approved at the unit level through regular curriculum processes; and complete approval for micro-credentials coming from entities without deans.

The MC Committee consists of eight voting members and three non-voting members. For the 2022-2023 academic year, there were two vacancies that were not filled from the previous year. The committee only consisted of six voting members and three non-voting members. The director of the Office of MCs and a Faculty Senate appointed faculty member are co-chairs. Faculty Senate representatives comprise three of the six voting members of the MC Committee (normally Faculty Senate representatives comprise five of the eight voting members).

In the 2022-2023 academic year, the MC committee approved twelve non-credit MCs and one credit-bearing MC. All of the MC proposals approved this year represent new offerings. The "Functioning of a Battery and Main Types" MC is the first of a series of MCs co-sponsored by New Energy New York and was approved by the committee in the spring semester. Watson Continuing Education has recently submitted seven MC proposals that are currently under review and are working on six additional MC proposals out of this initiative.

Microcredential Offerings Approved during AY 2022-2023:

Title	Department
Victim-Centered Forensic Health for RNs	Decker College of Nursing and Health Sciences
Foundations of Civic Engagement	Center for Civic Engagement (CCE)
Foundations of Community Engagement	Center for Civic Engagement (CCE)
International Tutor Training Program Certification (ITTPC) Level 1	University Tutorial Services
International Tutor Training Program Certification (ITTPC) Level 2	University Tutorial Services
Coding in R	Harpur Edge
Effective Public Speaking	Harpur Edge
Programming with Python Intermediate	Harpur Edge
Fusion 360 - CAD Basics	Watson Continuing Education
Coding in SQL	Harpur Edge
EOP Academic Coach	EOP
Functioning of a Battery and Main Types	Watson Continuing Education

Cyber Security Concepts	Watson College

2022-2023 Badges Issued:

School/Program	Number of Approved MCs	Badges Issued (between 6/15/22 - 5/30/2023)
Center for Civic Engagement	1	17
Decker College of Nursing and Health Sciences	1	-
EOP	1	-
Harpur College of Arts and Sciences	10	256
Libraries	1	-
School of Pharmacy and Pharmaceutical Sciences	1	22
Student Transitions and Success Services	1	26
University Tutorial Services	2	110
Watson College	1	18
Watson Continuing Education	35	774
Total	**57**	**1223**

In the 2022-2023 academic year, Patrick Madden was named co-chair of the Microcredentials committee to fill the vacant position. Two members of the committee from the previous year left the committee, but their seats were not filled. We explored the possibility of purchasing a continuing education platform to streamline the registration and payment process, but were unsuccessful in finding a platform that meets the needs of our campus. We had meetings with several student management software companies including D2L/Course Merchant and Ellucian Elevate. We will continue to look for the best fit for our campus.

Planned work for the coming year includes:

1. Filling the vacant committee member positions. In addition to the two seats that were vacant during the 2022-2023 academic year
2. Marketing the MC opportunities to departments and colleges and encouraging the development of MCs in strategic areas
3. Tracking data on number of participants in MC classes and badges issued across a range of MC topics.
4. Purchasing and implementing a platform to streamline the registration process and payment for non-credit MCs to allow for better reporting of student data to the committee and financial data to the Business office.

Respectfully submitted,
Celeste Lee, Director of Operations for the Office of the Vice Provost of Online and Innovative Education, Committee Co-Chair
Patrick Madden, Computer Science, Faculty Senate Appointee, Committee Co-Chair

Committee members
Sang Won Yoon, Systems Science and Industrial Engineering, Faculty Senate Appointee
Erin Cody, Harpur Edge, Provost's Designee

Michael Testani, Watson Continuing Education, Provost's Designee
Subimal Chatterjee, School of Management, Provost's Designee, Non-voting
Jennifer Mattson, Psychology, Provost's Designee, Non-voting
Xingye Qiao, Mathematics, Provost's Designee, Non-voting

Faculty Senate Professional Standards Committee
<u>Annual Report 2022-2023</u>

The Professional Standards Committee did not convene in 2022–2023, as no cases were brought to our attention.

Respectfully submitted,

_Robert Guay__, Committee Chair

<u>Committee members</u>
Christopher Bartlette
Hoe Kyung Kim
Sarah Maximiek
Melissa Zinkin

Please submit report via email to Kellie Hovancik at <u>khovanci@binghamton.edu</u>.

Faculty Senate Program Review Committee
<u>Annual Report 2022-2023</u>

The Program Review Committee met six times during the 2022/2023 academic year to consider curricular and policy matters.

Here is a summary of the policies for faculty review of curriculum passed by the faculty senate in 2012 which are used by the PRC and FSEC to guide their review of curriculum proposals:

Action	Item
No notification	Routine changes to existing majors, minors, certificates and degree programs that do not require SED approval
Notify PRC FSEC and/or PRC may undertake additional review if changes go beyond "routine"	Routine changes to existing majors, minors, certificates and degree programs require SED approval
Notify FSEC and PRC FSEC and/or PRC may undertake additional review	Combined degree programs (3-2, 4-1), Dual degree programs, new minors and local certificate programs (tracks)
PRC acts as a curriculum committee	All proposals for certificates, majors, minors, or other programs that are not reviewed at the college or school level
Full faculty senate review process (starts with PRC)	New degree programs, suspension or elimination of degree programs, new majors, new certificate-for-licensure programs

The PRC and FSEC were not notified of any Letters of Intent for development of new programs.

The PRC reviewed the procedures and forms for approval of graduate level combined degree proposals. The proposal form and sample program schedule forms (available on the Graduate School webpage) are required for combined degree (including 4 + 1) proposals.

PRC acting as curriculum committee	PRC	FSEC
none		

Routine changes requiring SED approval:	PRC	FSEC
Revision of Physics BA and BS degrees	Reviewed	Reviewed
Revision of the Interdepartmental Program	Reviewed	Reviewed
Revision of the BS in Computer Science	Reviewed	Reviewed
Revision of BA in Philosophy, Politics, and Law	Reviewed	Reviewed
Revision of Literacy Education, B-12	Reviewed	Reviewed
Revision of BFA in Studio Art	Reviewed	Reviewed
Revision of MS Accounting	Reviewed	Reviewed
Revision of MBA Business Administration	Reviewed	Reviewed
Revision of MS and PhD in Cognitive Psychology	Reviewed	Reviewed
Revision of BA in Political Science	Reviewed	Reviewed
Revision of MEAMS degrees: Ancient Mediterranean Studies Greek & Latin Latin Arabic	Reviewed	Reviewed
Revision of Pharm D	Reviewed	Reviewed

New minors	PRC	FSEC
Accounting minor	Reviewed	Reviewed

Expansions of existing programs into the distance education format	PRC	FSEC
Master of Social Work	Reviewed	Reviewed

Combined, dual degree, new tracks, for-credit micro-credentials, internal approval	PRC	FSEC
Victim Centered Forensic Health for RNs micro-credential	Reviewed	Reviewed
Linguistics and Translation 4 + 1	Reviewed	Reviewed
Harpur expanded 4+ 1 Blanket Degree proposals covering most Harpur BA and BS programs combined with the MA/MS Sustainable Communities, Masters in Public Health, MS in Human Rights, MS in GMAP, Masters in Public Administration and MS in Biomedical Anthropology	Reviewed	Reviewed
Harpur expanded 4+1 Blanket degree with MBA	Reviewed	Reviewed
Harpur expanded 4+1 Blanket degree with MA TESOL	Reviewed	Reviewed

New Schools, degrees, majors, deactivations, reactivations – requiring Faculty Senate approval	PRC	FSEC	Faculty Senate
School of the Arts	Reviewed	Reviewed	Approved November 1, 2022
SOPPS Dissolution of a Department (HOAS)	Reviewed	Reviewed	Approved November 1, 2022
BA and BS in Global Public Health	Reviewed	Reviewed	Approved December 6, 2022
Deactivate TLEL degrees: Adolescence Education: Biology (Advanced), Chemistry (Advanced), Earth Science (Advanced), Mathematics (Advanced), Physics (Advanced), Social Studies (Advanced), Spanish (Advanced)	Reviewed	Reviewed	Approved May 2, 2023

Respectfully submitted,

Sara Reiter, Committee Chair

Committee members
Kanishk Barhanpurkar
Daniel Croce
William Eggleston
Donald Hall
Donald Loewen
Patrick Madden
Gretchen Mahler
Loretta Mason-Williams
Sara Maximiek
Xingye Qiao
Daniel Rocabado
Nicole Rouhana
Chenqing Song
John Starks
Barbara Wolfe

Faculty Senate Calendar Committee
Annual Report 2022-2023

The Calendar Committee did not meet in 2022-2023. No changes were made to the calendar.

Respectfully submitted,

Donald E. Hall, Committee Chair

The 2022-2023 Calendar Committee members included:

Donald E. Hall, Provost and Executive Vice President for Academic Affairs (chair)

David Campbell, Public Administration

David Eagan, Athletics

Mark Fowler, Watson

Michael Kukawa, Physical Facilities

BrieAnna Langlie, Anthropology

Donald Loewen, Provost's Office

Sejal Luthra, undergraduate student

Colin Lyons, Art & Design

Krista Medionte-Phillips, Undergraduate Admissions

Paola Mignon, Residential Life

Carol Miles, Biology

Michelle Ponczek, Course Building/Academic Space

Judith Quaranta, School of Nursing

Amber Stallman, Financial Aid & Student Records

Eitan Weinsteiner, gradudate student

Barbara Wolfe, Theatre

Faculty Senate University Undergraduate Curriculum Committee Annual Report 2022-2023

During the 2022-2023 academic year, the UUCC participated with the Faculty Senate Task Force in the response to and planning for the implementation of the new General Education Requirements that were approved by the SUNY Board of Trustees. At the same time, they continued routine work approving university-wide courses, certifying courses that meet Binghamton University General Education requirements, and deciding on student petitions related to General Education requirements. There were 14 meetings using Zoom during the academic year, about 1 hour each: 6 in Fall 2022, and 8 in Spring 2023. During the summer 17 course proposals were considered by email. In the winter, 17 course proposals were considered by email. Statistics of the approval rates appear in Table 2 below. Overall, the UUCC has considered:

- Summer 2022
    - 1 Student appeal
    - 17 courses for 8 different Gen Ed designations (2 had to be resubmitted and reconsidered)
- Fall 2022
    - 5 Student appeals
    - 86 courses for 8 different Gen Ed designations (20 had to be reconsidered by the committee)
    - Approval of five new Scholars Courses and one UNIV course
- Spring 2023
    - 4 Student appeals
    - 93 courses for 12 different Gen Eds designations (17 had to be reconsidered by the committee). Note that courses can now receive the I (Information Literacy) and T (Critical Thinking) designations.
    - Approval of five new Scholars Courses.
- Winter 2023 and Spring 2023 On behalf of UUCC, Don Loewen and Paul Gorelik worked on a survey of all instructors teaching courses currently carrying other General Education designations, and identified which courses could also carry one or both of the I and T tags. A total of 231 I and T designations were approved in this way.

As a part of the transition to the new General Education Requirements, the Provost's Office prepared new, very specific, submission forms that ask for responses for how course proposals will meet the student learning outcomes for each requirement.

A significant change for UUCC, and many other committees, was the retirement at the end of the 2021-22 academic year of Sara Reiter, School of Management, who has been a key member of UUCC for very many years and provided a great wealth of institutional knowledge in our decision making. The committee is very grateful to her for many years of excellent service.

From my observation, Sara Reiter and Don Loewen spearheaded a great deal of the effort to adjust our General Education program to meet the new SUNY Requirements.

Additionally, the UUCC submitted the following structural change to the rules for giving multiple General Education tags to courses, which has been accepted by the Faculty Senate Executive Committee:

Table 1. Limitations on how courses can carry multiple General Education tags and guidelines for multiple-counting of General Education tags by students.

Column 1 Skills, activities and competencies (a course may have as many from this column as instructors cover and assess)	**Column 2** Methodologies (a course should only have one from this column)	**Column 3** Specific knowledge areas (a course should only have one only one from this column*)
C/O/J Communications	**H** Humanities (critical reflection)	**G** Global Interdependencies
T Critical Thinking	**A** Aesthetics (creative process)	**D** Diversity Equity Inclusion and Social Justice
I Information Literacy	**N** Social Science methodologies	
Y/S/B Activity, Wellness	**L** Scientific reasoning with laboratories	
WL World Languages		
M Mathematical (quantitative) skills		

Guideline for multiple-counting of General Education tags by students:

Situation 1: when a course has multiple tags and students get credit for all the tags:

- Students get credit for *all* tags from Column 1
- When Column 1 tags are combined with Column 2 and Column 3 tags, students get credit for all the Column 1 tags and one other tag from Columns 2 or 3 (see Situation 2)

Situation 2: when a course has multiple tags and students get credit for only one tag.

- Courses should have at most one tag from Column 2 and should have at most one tag from Column 3* but students will only get credit for one of those General Educations tags
- The choice of which tag will count is made by the Degree Works system depending on what the student needs.

* It has been recognized that there are a small number of courses that can justify both D and G tags.

Table 2 Acceptance rates for General Education proposals. Note that many course proposals included multiple General Education tags

General Education Category	Approvals	Denials	Approval Rates
A	23	3	0.88
B	0	0	-
Y	0	0	-
S	0	1	0
C	64	2	0.97
J	16	1	0.94
O	18	1	0.95
FL/WL	2	0	1
P/D	19	4	0.95
USP/USD	6	3	0.67
H	59	10	0.86
G	31	8	0.79
N	31	2	0.94
T*	9 (134)	0	1
I*	4 (97)	0	1
Totals	269	35	0.84

* The numbers in parentheses for T and I are for those courses that currently carry other General Education designations and where the instructor has agreed to also satisfy one or both of I and T and indicated how they will assess them.

The following pages also report on university-wide courses under the rubrics: UNIV, SCHL, ELI, GMAP, OUT, and CDCI.

Respectfully submitted,

Leslie Lander; Chair, Watson (Computer Science)

Committee Members (voting):
Megan Benson, University Libraries
Alexander Borisov, Harpur/Natural Sciences and Mathematics/Mathematics and Statistics
Deborah Elliston, Harpur/Social Sciences/Anthropology
Gangadhar Korrapati, Graduate student (must be a TA)
Steven Murphy, Harpur/Natural Sciences and Mathematics/Chemistry
Mary Muscari, Decker College of Nursing and Health Sciences
Anthony Reeves, Harpur/Humanities/Philosophy

Sara Reiter, School of Management
Jubie Tan, Undergraduate student

Committee members (non-voting):
Dave Clark, Harpur College Dean's office ex-officio member
Paul Gorelik, Provost's Office
Lisa Hrehor, Additional non-voting member if any
Don Loewen, Provost ex-officio member
Pamela Mischen, President ex-officio member

Report on Course Offerings approved by UUCC – 2022-2023 Academic Year

Table 3 below has a complete listing of all courses offered during the 2022-2023 academic year under the following rubrics:
- Binghamton Scholars Program – SCHL
- Career Development Center Internships – CDCI
- English Language Institute – ELI and EML (English for Multilinguals)
- Genocide and Mass Atrocity Prevention - GMAP
- Outdoor Pursuits - OUT
- University-Wide courses – UNIV

Working with John Starks, the Director of the Office of University-Wide Programs, the UUCC approved the following new university-wide course:
- UNIV 280M Materials Matter

The following new Scholars courses were approved:
- SCHL 281C Atonement, Redemption, and Justice
- SCHL 280F The Room Where it Happens: STEM and Equity
- SCHL 281K Women in Global Film & Fiction
- SCHL 280N How Chemistry Changed History
- SCHL 280O The Dementia of Dimension
- SCHL 280P History of Conservation: Parks
- SCHL 280Q Twilight Zone and Post-1945 US
- SCHL 280S Creating Collective Memory
- SCHL 280R Evolution and Free Will
- SCHL 280Y The Main St.–Wall St. Nexus

Table 3 Course Offerings approved by UUCC

Term Desc	CRN	Subject	Course #	Sect.	Title	Credit	Cap
Summer '22	16221	GMAP	381B	01	Soviet Gulags	4.000	2
Summer '22	15427	GMAP	538B	01	Sexual Offend & Victimization	3.000	5
Summer '22	16245	UNIV	180B	01	How to College	2.000	15
Fall 2022	30993	ELI	115	01	Academic Achievement Skills	0.000	18
Fall 2022	30079	ELI	120	03	Intermediate Read Write Vocab	4.000	18
Fall 2022	28791	ELI	205	01	Adv Speaking&Listening Compre	4.000	15
Fall 2022	28793	ELI	205	02	Adv Speaking&Listening Compre	4.000	18
Fall 2022	28797	ELI	205	04	Adv Speaking&Listening Compre	4.000	18
Fall 2022	28803	ELI	210	04	Academic Writing for ELLs	4.000	18
Fall 2022	28801	ELI	210	01	Academic Writing for ELLs	4.000	18
Fall 2022	28807	ELI	211	01	Advanced Writing for ELL	4.000	18
Fall 2022	30600	ELI	214	04	Crit Analysis/Argument Speech	2.000	18
Fall 2022	28810	ELI	215	01	Speaking Skills For Bilinguals	4.000	14
Fall 2022	32494	ELI	216	01	Eng Lang Dev Econ Business	4.000	18
Fall 2022	32495	ELI	218	01	Adv Eng Lang Transfer Students	4.000	18
Fall 2022	30994	ELI	391	01	ELL Outreach and Persistence	2.000	18
Fall 2022	28813	ELI	492	01	Tutoring English Lang Learners	1.000	12
Fall 2022	28792	ELI	715	01	Adv Speaking&Listening Compre	1.000-4.000	3
Fall 2022	28816	ELI	725	01	Oral Comm.For Prof.Purposes	1.000-4.000	4
Fall 2022	32336	GMAP	501	01	Micro-Dynamics - Mass Atrocity	4.000	10
Fall 2022	32338	GMAP	502	01	Comparative Genocides	4.000	10
Fall 2022	33532	GMAP	580	01	GMAP Field Placement	1.000-6.000	2
Fall 2022	30751	GMAP	281A	01	The Nazi State	4.000	3
Fall 2022	33434	GMAP	381C	01	Russia and Ukraine in Crisis	4.000	5
Fall 2022	33652	GMAP	381D	01	Refugee Lit of Eastern Europe	4.000	5
Fall 2022	32675	GMAP	383A	01	Human Rights	4.000	3
Fall 2022	32339	GMAP	481C	01	Comparative Genocides	4.000	10
Fall 2022	30499	GMAP	482B	01	Micro-Dynamics - Mass Atrocity	4.000	5
Fall 2022	33205	GMAP	483F	01	Social Marginalization&Trauma	4.000	5
Fall 2022	33240	GMAP	528B	01	Population Health II - Det&Dis	3.000	3
Fall 2022	32645	GMAP	538D	01	Issues:US History Before 1877	4.000	1
Fall 2022	33206	GMAP	538F	01	Creative Non-Fiction	4.000	3
Fall 2022	28595	OUT	121	01	Disc Golf	1.000	12
Fall 2022	26520	OUT	130	03	English Horsemanship	1.000	12
Fall 2022	26519	OUT	130	02	English Horsemanship	1.000	12
Fall 2022	29687	OUT	130	08	English Horsemanship	1.000	12
Fall 2022	29684	OUT	130	07	English Horsemanship	1.000	12
Fall 2022	26523	OUT	130	06	English Horsemanship	1.000	12

Term Desc	CRN	Subject	Course #	Sect.	Title	Credit	Cap
Fall 2022	26522	OUT	130	05	English Horsemanship	1.000	12
Fall 2022	26518	OUT	130	01	English Horsemanship	1.000	12
Fall 2022	26521	OUT	130	04	English Horsemanship	1.000	12
Fall 2022	29688	OUT	131	03	English Horsemanship II	1.000	8
Fall 2022	26525	OUT	131	01	English Horsemanship II	1.000	8
Fall 2022	28598	OUT	176	01	Fly FIshing	1.000	12
Fall 2022	26577	OUT	177	03	Hiking	1.000	12
Fall 2022	26576	OUT	177	02	Hiking	1.000	14
Fall 2022	26529	OUT	177	01	Hiking	1.000	13
Fall 2022	27556	OUT	255	02	Back Country Medicine	2.000	30
Fall 2022	26586	OUT	255	01	Back Country Medicine	2.000	26
Fall 2022	29276	SCHL	127	07	Scholars Cornerstone Seminar	2.000	25
Fall 2022	27893	SCHL	127	06	Scholars Cornerstone Seminar	2.000	25
Fall 2022	27892	SCHL	127	05	Scholars Cornerstone Seminar	2.000	25
Fall 2022	26752	SCHL	127	04	Scholars Cornerstone Seminar	2.000	25
Fall 2022	26751	SCHL	127	03	Scholars Cornerstone Seminar	2.000	25
Fall 2022	25133	SCHL	127	02	Scholars Cornerstone Seminar	2.000	25
Fall 2022	25132	SCHL	127	01	Scholars Cornerstone Seminar	2.000	25
Fall 2022	33199	SCHL	280F	01	In Room W Happens: STEM/Equity	4.000	25
Fall 2022	30206	SCHL	280L	01	Ghosts in American Culture	4.000	25
Fall 2022	31906	SCHL	281Q	01	Community Building via Debate	4.000	25
Fall 2022	33321	SCHL	281X	01	Countercultural Religion	4.000	25
Fall 2022	33317	SCHL	281Y	01	Slavery & Freedom in Rev. VA	4.000	25
Fall 2022	33201	SCHL	281Z	01	Mapping the Soundscape	4.000	16
Fall 2022	29943	UNIV	101A	01	The Power of Images	2.000	20
Fall 2022	29945	UNIV	101C	01	History of the National Parks	2.000	20
Fall 2022	29946	UNIV	101D	01	The Pitfalls of Perfection	2.000	20
Fall 2022	29948	UNIV	101E	01	LongCOVID:From BIOL to Society	2.000	19
Fall 2022	29949	UNIV	101F	01	What's Happening in College?	2.000	20
Fall 2022	29950	UNIV	101G	01	Animation Revolution	2.000	20
Fall 2022	29952	UNIV	101I	01	Leaders Changing Our World	2.000	20
Fall 2022	29953	UNIV	101J	01	Bee Alive! Hive/Life Lessons	2.000	20
Fall 2022	29954	UNIV	101K	01	SmartCities:Cities oftheFuture	2.000	20
Fall 2022	29955	UNIV	101L	01	Dance Into Words	2.000	20
Fall 2022	29956	UNIV	101M	01	Walt Disney and Modern America	2.000	20
Fall 2022	29957	UNIV	101N	01	What Is Fun About Fungi?	2.000	20
Fall 2022	29958	UNIV	101O	01	Festivals, Fans, & Jam Bands	2.000	20
Fall 2022	29959	UNIV	101P	01	In-Depth Disney	2.000	20
Fall 2022	29960	UNIV	101Q	01	Cultivating Queer Community	2.000	20

Term Desc	CRN	Subject	Course #	Sect.	Title	Credit	Cap
Fall 2022	29961	UNIV	101R	01	Experiments in Cinema	2.000	40
Fall 2022	29962	UNIV	101S	01	What About Time Travel?	2.000	20
Fall 2022	29964	UNIV	101U	01	Economics, Finance & Wellness	2.000	20
Fall 2022	29965	UNIV	101V	01	How to Social Work	2.000	20
Fall 2022	29966	UNIV	101W	01	Explaining Einstein's Gravity	2.000	20
Fall 2022	29967	UNIV	101X	01	Politics, Social Justice & Law	2.000	20
Fall 2022	32899	UNIV	101Y	02	Living a Meaningful Life	2.000	20
Fall 2022	29968	UNIV	101Y	01	Living a Meaningful Life	2.000	20
Fall 2022	29971	UNIV	103B	01	CollegeStudent HealthBehaviors	2.000	17
Fall 2022	29973	UNIV	103C	01	The Healthy College Athlete	2.000	20
Fall 2022	30881	UNIV	103D	01	Food Chemistry	2.000	20
Fall 2022	32900	UNIV	103E	01	Culinary Culture & Connections	2.000	20
Fall 2022	33108	UNIV	103F	01	Psychology of Academic Success	2.000	20
Fall 2022	27789	UNIV	280D	01	Global Entrepreneurship	3.000	30
Fall 2022	31810	UNIV	280F	01	Intro to Entrepreneurship	3.000	30
Fall 2022	29923	UNIV	280G	01	Social Entrepreneurship	3.000	30
Spring 2023	29621	ELI	205	01	Adv Speaking&Listening Compre	4.000	18
Spring 2023	29623	ELI	205	02	Adv Speaking&Listening Compre	4.000	15
Spring 2023	29633	ELI	210	03	Academic Writing for ELLs	4.000	18
Spring 2023	29631	ELI	210	01	Academic Writing for ELLs	4.000	18
Spring 2023	30810	ELI	211	04	Advanced Writing for ELL	4.000	18
Spring 2023	34969	ELI	213	01	Conquering Eng Academic Vocab	2.000	18
Spring 2023	29620	ELI	214	02	Crit Analysis/Argument Speech	2.000	18
Spring 2023	29617	ELI	215	01	Speaking Skills For Bilinguals	4.000	15
Spring 2023	33410	ELI	216	01	Eng Lang Dev Econ Business	4.000	18
Spring 2023	33751	ELI	218	01	Adv Eng Lang Transfer Students	4.000	18
Spring 2023	29637	ELI	492	01	Tutoring English Lang Learners	1.000	10
Spring 2023	29624	ELI	715	02	Adv Speaking&Listening Compre	1.000-4.000	3
Spring 2023	29636	ELI	720	01	Writing for Professionals	1.000-4.000	18
Spring 2023	29618	ELI	725	01	Oral Comm.For Prof.Purposes	1.000-4.000	3
Spring 2023	35004	GMAP	200	90	Intro. to Genocide Prevention	4.000	40
Spring 2023	33647	GMAP	480	01	Essentials of GMAP	4.000	25
Spring 2023	33470	GMAP	500	01	Essentials of GMAP	4.000	10
Spring 2023	33483	GMAP	503	01	Intro to Nongovt Organizations	3.000	5
Spring 2023	35019	GMAP	504	01	Transitional Justice	4.000	5
Spring 2023	33536	GMAP	550	01	Mechs of Atrocity Prevention	1.000-6.000	5
Spring 2023	33517	GMAP	580	01	GMAP Field Placement	3.000	5
Spring 2023	35106	GMAP	590	01	GMAP Capstone Project	4.000	5
Spring 2023	34478	GMAP	381D	01	The Art of Exile	4.000	5

Term Desc	CRN	Subject	Course #	Sect.	Title	Credit	Cap
Spring 2023	34526	GMAP	481F	01	The Environment Carib. & LA	4.000	2
Spring 2023	35003	GMAP	483B	01	Transitional Justice	3.000-4.000	7
Spring 2023	35021	GMAP	538F	01	Creative Non-Fiction	4.000	5
Spring 2023	34020	OUT	121	01	Disc Golf	1.000	12
Spring 2023	27645	OUT	122	01	Skiing/Snowboarding	1.000	85
Spring 2023	27646	OUT	122	02	Skiing/Snowboarding	1.000	150
Spring 2023	27647	OUT	122	03	Skiing/Snowboarding	1.000	125
Spring 2023	27648	OUT	122	04	Skiing/Snowboarding	1.000	180
Spring 2023	27658	OUT	130	05	English Horsemanship	1.000	8
Spring 2023	27653	OUT	130	02	English Horsemanship	1.000	8
Spring 2023	27659	OUT	130	06	English Horsemanship	1.000	8
Spring 2023	27657	OUT	130	04	English Horsemanship	1.000	8
Spring 2023	27654	OUT	130	03	English Horsemanship	1.000	8
Spring 2023	27649	OUT	130	01	English Horsemanship	1.000	8
Spring 2023	30091	OUT	130	08	English Horsemanship I	1.000	8
Spring 2023	30093	OUT	131	03	English Horsemanship II	1.000	8
Spring 2023	27660	OUT	131	01	English Horsemanship II	1.000	8
Spring 2023	27631	OUT	176	01	Fly FIshing	1.000	12
Spring 2023	27623	OUT	177	02	Hiking	1.000	13
Spring 2023	31038	OUT	177	01	Hiking	1.000	12
Spring 2023	27624	OUT	177	03	Hiking	1.000	12
Spring 2023	30095	OUT	255	02	Back Country Medicine	2.000	29
Spring 2023	27630	OUT	255	01	Back Country Medicine	2.000	28
Spring 2023	27733	SCHL	227	05	Commun Engage:Where You Fit In	2.000	28
Spring 2023	26794	SCHL	227	03	Commun Engage:Where You Fit In	2.000	28
Spring 2023	27732	SCHL	227	01	Commun Engage:Where You Fit In	2.000	28
Spring 2023	22015	SCHL	227	04	Commun Engage:Where You Fit In	2.000	28
Spring 2023	26793	SCHL	227	02	Commun Engage:Where You Fit In	2.000	29
Spring 2023	22012	SCHL	280I	01	Philanthropy & Civil Society	4.000	18
Spring 2023	34494	SCHL	280K	01	Who Owns the Past?	4.000	25
Spring 2023	34814	SCHL	280N	01	How Chemistry Changed History	4.000	23
Spring 2023	34815	SCHL	280O	01	The Dementia of Dimension	4.000	23
Spring 2023	35113	SCHL	280P	01	History of Conservation: Parks	4.000	23
Spring 2023	34860	SCHL	281C	01	Atonement,Redemption,Justice	4.000	18
Spring 2023	33975	SCHL	281V	01	History Goes to the Movies	4.000	23
Spring 2023	35075	UNIV	101C	01	History of the National Parks	2.000	20
Spring 2023	35076	UNIV	101M	01	Walt Disney and Modern America	2.000	20
Spring 2023	35077	UNIV	101V	01	How to Social Work	2.000	20
Spring 2023	31173	UNIV	180A	01	Critical Research Skills	2.000	30

Term Desc	CRN	Subject	Course #	Sect.	Title	Credit	Cap
Spring 2023	30308	UNIV	280D	01	Global Entrepreneurship	3.000	30
Spring 2023	29202	UNIV	280F	01	Intro to Entrepreneurship	3.000	30
Spring 2023	29203	UNIV	280G	01	Social Entrepreneurship	3.000	30
Spring 2023	32048	UNIV	280M	A 0	Materials Matter	4.000	30
Spring 2023	32066	UNIV	280M	A53	Materials Matter	0.000	8
Spring 2023	32056	UNIV	280M	A51	Materials Matter	0.000	8
Spring 2023	32051	UNIV	280M	A50	Materials Matter	0.000	6
Spring 2023	32061	UNIV	280M	A52	Materials Matter	0.000	8