



## MEMO

TO: Faculty Senate  
FROM: Steve Wojtkiewicz, Senator & Faculty Senate Secretary  
SUBJECT: Agenda for Monday March 15, 2021  
LOCATION: 4 PM on Zoom (<https://clarkson.zoom.us/j/759755486>)  
DATE: March 11, 2021  
Faculty Senate: <https://intranet.clarkson.edu/administrative/faculty-senate/>  
Faculty Senate Feedback: <https://forms.gle/5SRAjZPpQyKD9Nw39>

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- I. Approval of Agenda
- II. Approval of Meeting Minutes from March 1, 2021 (Sen. Doc. #2021-65)
- III. Communications
  - a. Course Scheduling – Process and Heuristic/Rules of the Road for Clarkson University (Sen. Doc. #2021-59)
  - b. Pathway to Student Achievement (Sen. Doc. #2021-60)
  - c. Budget Process Models (Sen. Doc. #2021-61)
  - d. Curriculum Update to BS in Physics (Sen. Doc. #2021-62)
  - e. Grad Student Health Insurance presentation slides from Feb 15<sup>th</sup> meeting (Sen. Doc. #2021-63)
  - f. Strategic Planning Framework Documents (including email from President Collins and Provost Hannigan) (Sen. Doc. #2021-64)
- IV. Old Business
- V. New Business
  - a. Discussion of Upcoming Elections (Senate and Senate Committees)
  - b. Discussion of Committee to Review Strategic Planning Framework 1-pagers (Sen. Doc. #2021-64)
  - c. Discussion of Budget Process Models (Sen. Doc. #2021-61)
  - d. Initial Discussion of Recommendations of ad hoc Committee on Faculty Governance (Alex Cohen) [Senate Governance Proposals 2021](#)

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Clarkson Faculty Senate Time: March 15, 2021 04:00 PM Eastern Time (US and Canada)

<https://clarkson.zoom.us/j/759755486> Meeting ID: 759 755 486

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Clarkson

FACULTY SENATE  
8 Clarkson Avenue  
Potsdam, New York 13699

## MEMO

TO: Faculty Senate

FROM: Steve Wojtkiewicz, Senator & Faculty Senate Secretary

SUBJECT: Minutes of Senate Meeting held on Monday March 1, 2021

LOCATION: Zoom (<https://clarkson.zoom.us/j/759755486>)

Faculty Senate: <https://intranet.clarkson.edu/administrative/faculty-senate/>

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Senate Members: Banavar, Cohen, Fite, Provost Hannigan (*ex-officio*), Graveline, MacKinnon, Melville, Michalek, Mousavian, Scrimgeour, Stephenson, Wallace, Wojtkiewicz, and York

Guests: E. Backus, E. Blauvelt, K. Chezum, S. Davis, J. Dempsey, A. DiMarco, E. Draper, B. Helenbrook, H. Irizarry-Quiñones, W. Jeffers, W. Jemison, L. Johns, K. Kavanagh, A. Khondker, J. Knack, S. Krishnan, V. LaFay, T. Langen, C. McNamara, L. Perry, A. Pickering, S. Rivera, C. Robinson, S. Robinson, C. Snyder, E. Stein, J. Stokes, A. Zebedee, and S. Zeigler

4:01 pm Meeting called to order by chair Kevin Fite.

### I. Approval of Agenda

Item e. **Summer School Course Policy Discussion** is removed. This item will be revisited once the Summer 2021 Provost memo on the topic is completed and distributed.

Agenda stands approved as Amended.

### II. Approval of Meeting Minutes from February 15, 2021 (Sen. Doc. #2021-58)

Needed Correction of Prof. H. Irizarry-Quiñones to Assoc. Dean H. Irizarry-Quiñones was noted and made in the amended minutes posted.

Minutes stand approved as amended.

### III. Communications

Chair Fite reviewed communications.

- a. Advanced Certificate Instructional Design Proposal (Sen. Doc. #2021-55)
- b. CAP Approval Memo for Civil & Environmental Eng. curriculum changes (Sen. Doc. #2021-56)
- c. CAP Approval memo for Extension Certificate (Sen. Doc. #2021-57)
- d. Faculty Involvement in FY2022 Budget (Oral Communication) (Sen. Doc. #2021-61)

Chair Fite relayed that efforts have begun for the inclusion of faculty input/feedback in the budgeting process. Due to the shortage of time before finalizing the FY2022 budget, this inclusion will be accomplished through consultation with the Faculty Senate Executive committee this year with the planned formation of a Budget and Long Term Planning Committee of the Faculty Senate to serve in this capacity in future years. Chair Fite also shared several potential budget process models for consideration by the Senate.

- e. Ad-Hoc Committee for Strategic Planning 1-page reviews (Oral Communication)

Chair Fite shared that the Provost has asked the Faculty Senate to form an *ad hoc* committee to review 1 page proposals submitted as part of the Strategic Planning Framework exercise announced on March 5. This committee will have broad representation including groups beyond faculty including representatives from Athletics, Diversity Initiatives, and Student Affairs among other staff constituencies. He also asked for the assistance of Senate in identifying potential committee members.

**IV. Old Business: None**

**V. New Business**

- a. **Civil Engineering BS Curriculum Change (Sen. Docs. #2021-50 & #2021-56)**

Motion to endorse and bring to floor for discussion by Scrimgeour (Mousavian).  
Motion carried, unanimously.

- b. **Environmental Engineering BS Curriculum Change (Sen. Docs. #2021-51 & #2021-56)**

Motion to endorse and bring to floor for discussion by Scrimgeour (Banavar).  
Motion carried, unanimously.

- c. **Career Education Internship Program Change (Sen. Docs. #2021-53 & #2021-57)**

Motion to endorse and bring to floor for discussion by Wojtkiewicz (Stephenson).  
Motion carried, unanimously.

- d. **Presentation on HighPoint (Suzanne Davis and Jen Stokes) (Sen. Doc. #2021-60)**

Suzanne Davis gave a brief overview of the efforts for implementation of the HighPoint bolt-on to Peoplesoft. Three different aspects are being pursued: Schedule Builder, Degree Planner, and Course Auditor with the overall goal of enhancing the user experience for both students and advisors. This implementation is being done in three phases with a planned go live date of March 12 for the Schedule Builder aspect, in time to be used for Fall 2021 course enrollment. Jen Stokes then provided a hands-on demonstration of the Schedule Builder component of the effort.

**4:54 pm Motion to adjourn by Mousavian(Wallace). Meeting Adjourned.**

## Items of Communication



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TO: Faculty Senate, Clarkson University  
Dr. Robyn Hannigan, Provost, Clarkson University

CC: Dr. Augustine Lado, Dean, Reh School of Business  
Dr. William Jemison, Dean, Coulter School of Engineering  
Dr. Thomas Langen, Interim Dean, School of Arts and Sciences  
Dr. Lennart Johns, Dean, Lewis School of Health Sciences  
Dr. Kerop Janoyan, Dean, Graduate School  
Dr. Susan Powers, Director, Institute for a Sustainable Environment  
Ms. Amanda Pickering, Executive Director of Academic Affairs

FROM: See Signatories Below

SUBJECT: Course Scheduling – Process and Heuristic/Rules of the Road for Clarkson University

DATE: 24 February 2021

This memorandum is drafted by a number of department and school level administrative leaders from across all three undergraduate degree granting schools, representing the vast majority of the student and faculty headcount, who have a significant, if not primary role, in their course scheduling. A dialog was started among this group based on a concern pertaining to the way classes are being scheduled, as directed by Academic Affairs, over the last several semesters (omitting the unique circumstances of COVID<sup>1</sup>), based on new and increasingly restrictive rules of the road for that process, which those here represented, as faculty or departments, did not have a voice in making. There is widespread concurrence on several facets of this issue, summarized best as follows.

We agree that there is a complicated problem we all would like to see corrected. While we empathize and concur with many of the underlying intents<sup>2</sup>, we believe that this has been made worse through trying to force a standard on the existing system over the last several years. Regardless of how this occurred, we would like to be contributors to the needed adjustments to make the process and results better for all parties at the institution. One of the several unintended consequences, for instance, of constricting classes to the shorter time frames (freeing up lunch and evenings), is that some students will likely not be able to get the courses that they want or in the sequence they need. There is also stress in the efforts of the registrar as they now often lack the freedom of movement to make decisions at their level to adjust the schedule to better meet student and department needs, creating more conflicts than is necessary. Many of us<sup>3</sup> also have pedagogical requirements that need to be addressed outside "standard" times within our course or curricula, which we believe should not require/be considered "exceptions" on an ongoing basis. Rather, these should be acknowledged as "standard" for our varied

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<sup>1</sup> It is understood and appreciated by this group that the unique situation of the COVID pandemic necessitated certain emergency and directed measures that did not allow for consultation on the part the faculty ahead of time. To that end, we are grateful for the Office of Academic Affairs for their forthrightness and flexibility as we worked through these challenging times.

<sup>2</sup> Better space utilization, minimization of class conflicts for students, etc.

<sup>3</sup> Who with few exceptions also actively instruct courses, as well as advise and mentor students throughout their tenure at Clarkson.

curricula or courses,<sup>4</sup> with any standard developed acknowledging those critical variations. Like Academic Affairs, we desire the minimization of student schedule conflicts while also desiring better teaching load allocations and providing the best educational and collegiate experience within the limited classroom/lab/studio/etc. time/space we have available.<sup>5</sup>

This group of department chairs, executive officers, and administrative personnel, are committing ourselves to a dialog with SAS, Academic Affairs, and the Provost ahead of any further changes to how academic scheduling might proceed in the future as well as to review what has become de facto policy on the course scheduling in order to look for opportunities to improve the overall system towards joint goals. We are committed, under the auspices of the Faculty Senate, so long as they agree so, with the intention to report back to the faculty regularly (and also suggesting that if there are other interested departments/campuses in this effort, that they should also be free to have representation within this effort). Our intent is to work to advance a better approach collaboratively with the administration to address course scheduling going forward.

Signatories:

Erik C. Backus, Executive Officer, Department of Civil and Environmental Engineering  
Kevin Fite, Executive Officer, Department of Mechanical and Aeronautical Engineering  
Abul Khondker, Executive Officer, Department of Electrical and Computer Engineering  
Alastair Kocho Williams, Chair, Department of Humanities and Social Sciences  
Floyd Ormsbee, Associate Dean for Undergraduate Programs & Operation, Reh School of Business  
James Peploski, Executive Officer and Director of Freshman Chemistry, Department of Chemistry & Biomolecular Science  
Patricia Perrier, Director of Operations, Reh School of Business  
Dipankar Roy, Chair, Department of Physics  
Jason Schmitt, Chair, Department of Communications, Media, & Design  
Joseph Skufca, Chair, Department of Mathematics  
Michael Twiss, Chair, Department of Biology

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<sup>4</sup> Including the application of said criteria or differentiation from said criteria, on graduate level courses.

<sup>5</sup> For we agree the utilization of our spaces ought to be maximized.

# Pathway to Student Achievement

Clarkson's Partnership with HighPoint

## Our Journey

- Implemented PS Campus Solutions in 2003
- User experience doesn't support expectations
- Oracle shift to cloud solution



- Support a holistic student approach
- Improve the current technology to scale support, improve operations, and generate actionable data for ongoing process improvement

## OVERVIEW

- Evaluated products that would leverage our existing investment in PS
- Deliver an improved user experience for students, advisors, faculty, and staff
- Extend the life of PS Campus Solutions



- Brought together keystone holders across campus to participate in vendor presentations
- Gathered feedback and recommendations
- Presented the recommendation for approval

## CHOICE

- Leader in student success solutions for PS Higher Education
- No integrations needed
- Leverage our existing investment in PS



- Delivers an improved user experience
- Offer solutions for advising, class scheduling, degree planning, and demand planning
- Comply with Title IV requirements and keep students on track toward graduation

## SOLUTIONS

### Campus Experience

- Provides a better UI experience - mobile integration framework
- Manage Guest User Access
- Easier and better class search capabilities
- Reduces the class search and enroll from 9 steps to 1 step
- Provides drop if enrolled functionality for waitlisted courses
- Eliminated permission numbers

Scheduler Builder

### Scheduler Builder

- Provides student options to build multiple schedules and save as favorites
- View real-time class availability
- Allows advisors to see a student's schedule and create one for them

Campus Experience

Degree Planner

### Degree Planner

- Provides an intuitive and powerful planning and degree tracking tool.
- Helps students and advisors develop and sequence a personalized path to on-time graduation.
- Leverages the institutions ability to analyze course demand for future scheduling.

Course Auditor

### Course Auditor

- Indicates courses not eligible for Title IV Financial Aid
- Notifies both the student and advisor
- Ensures compliance with Title IV funding

## TIMELINE

Phase One  
(January - February)

Phase Two  
March - June

Phase Three  
July - December

Schedule Builder - Implementation

Schedule Builder Go Live March 12

Degree Planner - Implementation

Course Auditor - Implementation

Course Auditor Go Live May

Degree Planner - Go Live December

Campus Experience - Implementation / Go Live June

**I. Princeton Priorities Committee:**  
**APPENDIX A: PRINCETON UNIVERSITY BUDGET PROCESS MODEL**  
(<http://provost.princeton.edu/committees#committees-page-31>)

The Priorities Committee at Princeton was formed as part of the Council of the Princeton University Community in 1969-70 and the CPUC is still part of the governance of Princeton.

The Priorities Committee is a subcommittee of the Council of the Princeton University Community (CPUC) and is advisory to the president. The committee reviews the operating budget of the University, considers issues that arise in the course of the preparation of that budget and reviews plans for the development of the University. The provost chairs the committee which also includes the dean of the faculty, the executive vice president, the treasurer, six faculty members (at least one from each division and one non-tenured), four undergraduate and two graduate students (chosen with due consideration to the variety of interests represented in the student body) and one member from one of the other groups represented. In addition, the vice provost for academic and budget planning, the assistant provost for academic management and the budget director and associate provost for finance also meet with the committee.

I am indebted to Carolyn Ainslie, Vice President for Finance and Treasurer at Princeton for the following material on the CPUC, which she also presented at NACUBO several years ago.

- ☐ The committee meets throughout the fall twice a week.
- ☐ Campus leaders can submit budget requests through the Provost's office and they may be forwarded to the Priorities Committee.
- ☐ The Committee also serves as a key focus group on campus issues that have a financial or service impact.
- ☐ The committee hosts an open meeting for the campus in the late fall with the CPUC for any community member to raise questions about the budget.
- ☐ The committee meets with the Finance Committee of the Board of Trustees in November to discuss the budget and assumptions.
- ☐ The Committee submits a public report to the President in the early spring on the recommendations on the operating budget.
- ☐ CPUC members become knowledgeable members of the community as they return to their own departments - they often are future leaders and are well-informed on university governance and planning.



☐ Having the structure in place during good times, provides an important resource when there are stressed times.

☐ The agendas and focus vary based on the current issues.

☐ During the recession of 2009 and 2010, the Priorities Committee was instrumental in helping shape budget adjustments to respond to the financial crisis particularly around salary pools.

☐ The engagement of faculty and students in the same room on issues creates a rich forum for discussion.

## II. THE UNIVERSITY OF PUGET SOUND BUDGET TASK FORCE

([https://www.pugetsound.edu/files/resources/5748\\_BudgetingProcess.pdf](https://www.pugetsound.edu/files/resources/5748_BudgetingProcess.pdf))

Because the operating budget is a document that reflects the University's planning, Puget Sound has relied for many years on an unusually comprehensive process in developing that budget. An advisory committee to the President, the Budget Task Force, reviews proposals from across the institution and recommends a budget to the President, who, after his review and action, makes a recommendation on the budget to the Board of Trustees. The Budget Task Force consists of two faculty members, two students, two staff members, the Vice President for Finance and Administration, and the Academic Vice President, who serves as the Budget Task Force chair. The Associate Vice President for Accounting and Budget Services provides information support.

The Budget Task Force is charged with weighing competing requests and recommending to the President those ongoing additions to the base budget which most forward Puget Sound's mission. The proposed operating budget recommends such key variables as tuition, student fees, increases in the faculty and staff compensation pool, and student financial aid. The budget also reflects other revenues and expenses.

Members of the Budget Task Force are charged with representing the best interests of the University as a whole rather than the interests of any constituent group. All their discussions are to be confidential.

- Budget Task Force Membership
- Academic Vice President, Chair
- Vice President for Finance and Administration
- Associate Vice President for Accounting and Budget Services – Information support

- Two Students. Each student normally serves a two-year term, one student being new each year. Students apply for membership on the task force by interviewing for the position with the ASUPS President. The ASUPS President then submits two or three recommendations to the University President who selects the new member.
- Two Faculty. The faculty member of the Board of Trustees Finance & Facilities Committee (appointed by the Board Chair on recommendation of the Faculty Senate Executive Committee in consultation with the Academic Vice President and the President) serves a simultaneous three-year appointment to the Budget Task Force. The second faculty member normally is the past chair of the Faculty Senate, who serves a two-year term.
- Two Staff. Each staff member serves a two-year term with one staff member being new each year. The Staff Senate Chair submits two or three recommendations to the President, who selects each new member.

### Budget Task Force Process and Timetable

The Budget Task Force begins meeting in September or October to review the current year budget and long-range financial planning goals of the University. These long-range goals for enrollment, student financial aid, faculty and staff compensation, and tuition are the key element in the budget process and were developed in 1986 by an ad-hoc trustee committee composed of trustees, faculty, students, and staff.

As the fall term proceeds, any and all members or committees of the campus community are invited to submit requests or opinions to the Budget Task Force. This generally takes the form of written communication, but could be a presentation to the Budget Task Force at one of its meetings. The campus community is informed of these deliberations through the ASUPS "Tattler," the "Open Line" for faculty and staff, an occasional article in the "Trail" (student newspaper), and special invitations to ASUPS executives and University Vice Presidents.

Groups or committees that regularly or occasionally make requests or recommendations to the Budget Task Force would include: ASUPS Executives, Academic Vice President, Business Services, Facilities Services, Faculty Salary Committee, Human Resources, Information Technology, Office of Finance, Staff Salary Committee, Student Financial Services, University Relations, Vice President for Enrollment, and Vice President for Student Affairs.

Once all have had an opportunity to meet with the Budget Task Force or have their material received by the committee, the information is assembled into budget alternatives. The Budget Task Force generally requires the balance of the fall term to come to a recommendation, which it then presents to the President. Formal votes rarely occur. Minority opinions seldom arise. Generally, a broad consensus is

developed and agreed to by all members of the Budget Task Force before a recommendation is made to the President.

The President has the opportunity to review all material submitted to the Budget Task Force and can, of course, change any recommendation made by the committee. The Budget Task Force reviews its recommendations with the ASUPS Senate, the Faculty Senate, and the Staff Senate at the beginning of the spring semester. All students, faculty, and staff are welcome at these presentations. A two-week comment period occurs prior to the February Board of Trustees meeting where final action must take place. During this two-week period, any group, committee, or individual of the campus community may write to the President expressing their opinion on any element of the proposed budget.

The President reviews the recommended budget with the Finance & Facilities Committee of the Board of Trustees. Final action is made by the Board of Trustees.



# Clarkson

*Date 01/18/2021*

To: Faculty Senate

From: Jan Scrimgeour, Chair, Undergraduate Curriculum Committee, Department of Physics

Re: Updates to Physics Major Requirements

## **Executive Summary**

On June 5<sup>th</sup> 2020, the Physics Department voted to approve the five changes to the physics major requirements. This document contains a description of these updates. These changes were recommended to the department by the undergraduate curriculum committee with main two goals (i) to ensure physics majors are taking an appropriate number of upper level elective courses, and (ii) to simplify and modernize the major requirements to make it easier for students and advisors to navigate. The changes require no new courses and represent substantially less than 30% of the current major requirements and would not require approval by the state. No impact on other units within the University is anticipated from these changes.

## **Proposal Contents**

- a) CAP Checklist
- b) Policy Changes and Justification
- c) New Physics Major Requirements
- d) Updated 4 Year Plan for Physics Majors
- e) Supporting Memos – To be appended as received

Department of Physics  
Clarkson University  
8 Clarkson Ave  
Potsdam, NY, 13699

**Checklist for CAP proposal submissions**

	Degree Programs	Minors & Certificates
<b>Part 1: Detailed Proposal</b>		
a. Overall requirements for earning degree/minor/certificate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. List of curricular outcomes and/or learning objectives	<input type="checkbox"/>	<input type="checkbox"/>
c. Eight semester plan (for proposals at the undergraduate level) or Sequencing plan (for proposals at the graduate level)	<input checked="" type="checkbox"/>	
d. Catalog copy for new program or significant changes	<input type="checkbox"/>	<input type="checkbox"/>
e. New or changed course descriptions, including pre-requisites/co-requisites	<input type="checkbox"/>	<input type="checkbox"/>
f. Copy of the completed Course Change Approval form for each class as appropriate*	<input type="checkbox"/>	<input type="checkbox"/>
g. Sample syllabus for each new or changed course	<input type="checkbox"/>	<input type="checkbox"/>
h. Completed NYSED application for new programs or changes to existing degrees involving >30% of the current degree requirements	<input type="checkbox"/>	
<b>Part 2: Proposal Support</b>		
a. Documented approval from the appropriate faculty or faculty committees within each department and/or school	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Comprehensive review by the Provost's Academic Leadership Cabinet (ALC) of the effects on other programs and units by a new program or change(s) in an existing program.**	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Approval memo from the Provost incorporating the outcomes from the comprehensive review by the ALC in step (b) above.**	<input checked="" type="checkbox"/>	<input type="checkbox"/>

\*The course approval process is separate from the curriculum approval process. You should make sure that the course approval forms get submitted to SAS once the appropriate Dean has signed off on them.

\*\*A comprehensive review, at a minimum, identifies the impact the proposed program has on each of the schools in addition to what resources would be required to execute the program. This includes review of class offerings and capacities given the projected enrollment of the proposed program.

## Summary of Proposed Changes

1. Add stipulation specifying the number of upper level electives to be taken as part of the physics major. **New language** - Students should take: One 300 level PH elective course and one 400 level PH elective course.
2. Add language excluding courses from meeting above requirements. **New language** - Teaching methods in physics, directed study and directed research courses do not count towards this requirement. 100/200 level PH elective courses (i.e. courses outside PH 141, PH 142, PH 221, PH 231, and PH 232) do not count towards the major in physics.
3. Update Professional Elective requirement. **New Language** - Students should take: One 400 level PH subject course), this is enforced by adoption of (i). This replaces the current requirement for senior thesis/directed study.
4. Conversion of concentration electives to free electives
5. Change the InfoTech elective to Programming intensive elective

## Motivation for Changes

**Items 1 and 2** are a response to the impact of recently added elective physics courses at the 100 and 200 level and trends that have seen student trying to avoid upper level elective courses. Specifying the need to take upper level electives ensures that physics majors receive an appropriate exposure to advanced course work, and will help ensure healthy enrollments in upper level elective courses.

**Item 3** formalizes a common exception made to the current major requirements where students use a 400 level elective course to meet the Professional Elective requirement of the common experience.

**Item 4** removes confusing language related to external electives (or “concentration electives” in the language found in the current physics major requirements) from the physics major requirements. The term concentration has a specific meaning within the context of University issued and state approved qualifications that these do not fulfil. The physics department decided that the best course of action would be to convert these to free electives.

**Item 5** modernizes the InfoTech elective in the current physics major requirements to make its purpose clear to students. Computer programming and software use is an essential skill for physics majors. The course list for this requirement was developed by identifying the programming intensive courses currently taken by physics majors. As such, we do not anticipate any impact on other units in the university.

## New Physics Major Requirements

New or modified requirements are highlighted in yellow.

The physics major requires a total of 35 credits<sup>1</sup> of physics courses, including:

1. Core Courses: PH 121, PH 131, PH 132, PH 221, PH 231, PH 232, PH 325, PH 327, PH 331, and PH 380<sup>2</sup>
2. One 3-credit 300 level PH elective course<sup>3</sup>
3. One 3-credit 400 level PH elective course<sup>3</sup>
4. One credit from any of the following professional experience courses PH 445 (Senior Thesis), PH 478 (Directed Research Experimental), PH 479 (Directed Research Theoretical) or PH 480 (Internship/Co-Op)

In addition, students are required to take:

1. 18 credits of Mathematics (including MA 131, MA 132, MA 231, and MA 232 plus any two 300 level or higher math courses)
2. 8 credits of Chemistry (CM 131 and CM 132)
3. One 3-credit Biology course (Any)
4. A minimum of two credits from a programming intensive course (CS 141 recommended, but also ES 100, MA 200, PH 320, PH 463. Honors students may count HP 102 or HP 103 towards this requirement)<sup>4</sup>

and meet the University requirements for graduation with a Bachelor's degree.

<sup>1</sup>For students considering attending graduate school in physics a total of 45 credit in physics is recommended including PH 451, two additional 300 level PH elective courses and one additional 400 level elective course.

<sup>2</sup>Students adding the physics major after their first semester may replace PH 121 (First Year Seminar) with PH 451 (Senior Seminar)

<sup>3</sup>Teaching methods in physics, directed study, directed research and senior thesis courses do not count towards this requirement.

<sup>4</sup>Where a PH course is used to satisfy the requirement it does not count towards the 35 credits of physics required for the physics major.

Note: 100/200 level PH elective courses (i.e. courses outside PH 131, PH 132, PH 221, PH 231, and PH 232) do not count towards the major in physics.

## Physics Major 4 Year Plan

New or modified elements have been highlighted in red – the new free electives were previously “concentration” electives.

### *Physics Curriculum (Core option)*

<b>Fall 1</b>		<b>Spring 1</b>	
<b>Course</b>	<b>Credits</b>	<b>Course</b>	<b>Credits</b>
PH 131 Physics I	4	PH 132 Physics II	4
First-Year Seminar	1	MA 132 Calculus II	3
MA 131 Calculus I	3	CM 132 Chemistry II	4
CM 131 Chemistry I	4	Free Elective (Rec. PH 157)	3
Clarkson Seminar	3		
PH 121 Phy Freshman Seminar	1		
	<b>16</b>		<b>14</b>
<b>Fall 2</b>		<b>Spring 2</b>	
PH 231 Modern Physics	3	PH 221 Theoretical Mechanics	3
PH 232 Modern Phys Lab	1	MA 231 Calculus III	3
MA 232 Differential Eq	3	Free elective (C1)	3
Biology Elective (Rec. BY 110)	3	Knowledge Area Elec	3
Knowledge Area Elec	3	Free Elective	3
Programming Elec (Rec. CS 141)	3		
	<b>16</b>		<b>15</b>
<b>Fall 3</b>		<b>Spring 3</b>	
PH 325 Thermal Physics	3	PH 331 Quantum Physics I	3
PH 380 Electromag Th I	3	Knowledge Area	3
MA 381 Probability	3	MA 331 Fourier Ser. & BVP	3
Free Elective	3	PH 327 Exper Phys I	3
Knowledge Area Elec	3	Free Elective (C2)	3
	<b>15</b>		<b>15</b>
<b>Fall 4</b>		<b>Spring 4</b>	
300 Level PH Elective	3	400 Level PH Elective	3
PH 435 Senior Seminar	1	TECH Elective	3
UNIV Elective	3	Free Elective	3
Free or Biology Elective	3	Free Elective	3
Professional Experience	1	Free Elective	3
Free Elective	3		
	<b>14</b>		<b>15</b>



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## Physics Major Program Updates

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**Tom Langen** <tlangen@clarkson.edu>  
To: Dipankar Roy <droy@clarkson.edu>  
Cc: Jan Scrimgeour <jscrimge@clarkson.edu>

Mon, Feb 1, 2021 at 9:00 PM

It has my approval and has been forwarded, with my approval memo, for review and approval by the Provost's Council.

cheers,

**Tom Langen**

Interim Dean, School of Arts & Sciences  
Professor, Depts. of Biology, Psychology  
Clarkson University

Dean's Office Location: 3058 Snell Hall  
Mail, Dean's office: Box 5800, Clarkson University, Potsdam NY 13699-5800  
Mail, Home: 7 Pleasant St., Canton NY 13617  
phone: 315 268 7933 (office), 315 261 0182 (cell), 315 268 4365 (Dean's office)  
Email: [tlangen@clarkson.edu](mailto:tlangen@clarkson.edu)

On Mon, Feb 1, 2021 at 8:00 AM Dipankar Roy <droy@clarkson.edu> wrote:

Hi Tom,

In a meeting on June 5, 2020, our physics faculty unanimously approved a proposal by the Physics Curriculum Committee to update our undergraduate curriculum. Jan Scrimgeour, Chair of our Curriculum Committee, has prepared the attached document describing the proposed updates. This proposal now needs to be approved by you and by the provost before it is presented to the Faculty Senate for discussion and approval. Jan, also our representative in the senate, has agreed to conduct the senate discussions of this matter.

Two notes: 1) There is a CAP checklist on the first page of the document; this will be added at the senate-review stage after the proposal is approved by the dean and the provost. 2) The last page is an updated version of our physics curriculum incorporating the proposal.

Best,  
Dip



Clarkson

March 5, 2021

To Members of Faculty Senate:

Please accept this letter as notification, we, the Provost's Council, endorse the following item voted unanimous, to move forward in the internal approvals process:

Academic Program	Date of Vote
BS in Physics Program five curricular changes	3/1/2021

Please advise if there are questions or concerns.

Sincerely,

A handwritten signature in cursive script that reads "Amanda J. Pickering".

Amanda J. Pickering  
Executive Director of Academic Affairs  
Office of the Provost

## Senate Document: #2021-63

Even though Clarkson offers a graduate student health insurance plan through UHC, there are strong reasons to believe that graduate students at Clarkson (especially international graduate students) are opting out of the plan. Faculty have noticed that their advisees are reluctant to seek out medical care during illness, and that when they do use medical care, the low-level of benefits results in high cost and therefore high stress among graduate students. Ultimately, this results in lower quality of life for graduate students, difficulty in their scholarly work, and may negatively impact faculty's ability to maintain a high level research program.

The attached slides were prepared by M. Budisic (Asst. Prof. and Graduate Chair in Mathematics). They show results of a (high-response rate) poll conducted among mathematics graduate students in February 2021, showing that students find the UHC plan too expensive to use (83% opt-out rate). It also shows a comparison between UHC and UMR (employee) plans, showing that typical premium under UHC is 4-8x more expensive (relative to Teaching Assistant's income) compared to the employee plans. The second set of slides, prepared by Clarkson's Graduate Student Association, shows that other regional universities provide more affordable and higher quality health care options to their graduate students.

Based on this, we urge the University administration to devote energy to improve the quality of access to health care for graduate students, and especially international TAs and RAs whose finances are almost completely dependent on Clarkson's stipends and fees. Among suggested solutions are paying the premium for graduate students as a job benefit, in addition to their current TA/RA stipend, negotiate a significantly more affordable/comprehensive health care plan with the same or alternative providers, or allow access to income-tiered UMR employee plans for TAs and RAs.

# Health insurance for MATH MS/PHD

## Students dominantly international, work as TAs

- 22 on-campus students, 1 remote
- 17 international students, 6 domestic
- 10 F, 13 M (PeopleSoft classification)
- ~25% international students support families (spouse+children)
- Support: TA (18), RA(3), Self/other (2)
- UHC Insurance Plan promoted by Clarkson; students can opt out; domestic students can shop through Obamacare marketplace (income adjusted) or Medicaid;
- int'l. F1/J1 not eligible for Obamacare/Medicaid

## Survey results: Majority find CU UHC plan too expensive – alt. plans leave them underinsured

- 83.3% do not buy Clarkson's UHC student insurance
- Overwhelming reason is high cost compared to the stipend
- Alternative plans: \$0 (Medicaid); those not eligible purchase plans with premiums around \$25-\$50/pp
- Only 5/18 have any dental coverage – again, reason is they cannot afford it
- Three people had emergencies not covered by their plans
- 60% students believe they are a typical case

Source: Department survey (anonymous) – 18/23 responded

## Cost comparison: Employee plans are significantly more affordable

pp - pay period; graduate income based on TA offer letters for mathematics in Summer 2020

- <https://www.clarkson.edu/human-resources/health-insurance>
- <https://www.clarkson.edu/student-administrative-services-sas/student-health-insurance>
- <https://www.haylor.com/college/clarkson-university/>

### UHC Grad Health Insurance

80% covered; 100% after \$6,800/\$13,700

Income: \$25,750/yr or \$1,030/pp

- Premium (single): \$132/pp
- Premium/income: 12.81%
- Premium (family, max): \$395/pp
- Premium/income: 38.35%

### UMR Tier 1 plan (if TAs were employees)

80% covered; 100% after \$3,000/\$6,000

Income: \$25,750/yr or \$1,030/pp

- Premium (single): \$36/pp
- Premium/income: 03.50%
- Premium (family, max): \$154/pp
- Premium/income: 14.9%

### UMR Tier 3 plan

80% covered; 100% after \$3,000/\$6,000

Example: \$70,000/yr or \$2,800/pp

- Premium (single): \$45/pp
- Premium/income: 01.61%
- Premium (family, max): \$201/pp
- Premium/income: 07.18%

## Comments from mathematics graduate students:

- I think the university should consider the cost of health insurance provided by Clarkson. Especially, considering that there are many international students around whose only source of income is through Teaching/Research Assistantship
- I pay more for insurance than I did in undergraduate and I pay more for my prescriptions than I used to.
- Should give us free healthcare. It's a human right.
- I would prefer getting more health coverage if it were less expensive

- I think the university could do a better job in educating its grad students that are eligible for marketplace health coverage as it is significantly better/cheaper. Students with work employment authorization, temporary residents, permanent residents, and citizens are all eligible for coverage through the state - and because scaled to what you earn, it's very affordable.
- The University should lower the premium for the health insurance. It's too expensive
- Need to reduce cost of Clarkson insurance cost?
- As it was difficult to purchase the annual insurance from Clarkson's plan in one payment compared to other insurance plans, I purchased insurance plan that fits to my budget.



CU · Student Administrative Services (SAS)

## Student Health Insurance

### Student Health Insurance


Student health insurance coverage is mandatory at Clarkson University for non-distance program students. Students must either have adequate health insurance through their parent/guardian, their own coverage, or enroll in Clarkson University's provided coverage through United Health Care.

Students that have coverage through their parent/guardian or their own coverage will need to provide proof of coverage by completing the appropriate waiver form through their myCU account. The information entered in the waiver form will be verified by the health insurance administrator (Haylor, Freyer & Coon, Inc.). Coverages will need to meet minimum standards as determined by the health insurance administrator in conjunction with the University's Director of Risk Management; if your coverage is deemed not to have met the minimum standards, then you will need to adjust your coverage to meet the minimum standards or become enrolled in Clarkson University's provided coverage through United Health Care. Furthermore, coverages for 2020 must be active on or prior to 8/1/20; any exemptions to this date will require approval from the University's Director of Risk Management.

The 2020-2021 student health insurance rate for Undergraduate students is \$1,493 for the period of 1/1/21 – 7/31/21.

The 2020-2021 student health insurance rate for Graduate students is \$1,911 for the period of 1/1/21 – 7/31/21.

University	Insurance plan	Amount	Paid by	Graduate Population
Cornell University	Offered by Aetna, school suggested <a href="https://gradschool.cornell.edu/policies/health-insurance/">https://gradschool.cornell.edu/policies/health-insurance/</a>	\$3108 per year Can get semester wise also	TA, RA, GRA, GA are enrolled at no cost	6,239
Syracuse University	Offered by Aetna, school suggested <a href="https://www.aetnastudenthealth.com/schools/syracuse/pdbs1920.pdf">https://www.aetnastudenthealth.com/schools/syracuse/pdbs1920.pdf</a>	\$1700 per year	Fully by students	6,919
Pace University	School suggested <a href="https://www.pace.edu/health-insurance">https://www.pace.edu/health-insurance</a> Students can do their own preferences as well	\$1700 per year	Fully by students	4649
RPI University	<a href="https://studenthealth.rpi.edu/insurance">https://studenthealth.rpi.edu/insurance</a>	\$704 per semester - which includes an administrative fee of \$12.45		
SUNY Canton	<a href="https://www.canton.edu/media/pdf/insurance-highlights.pdf">https://www.canton.edu/media/pdf/insurance-highlights.pdf</a>	Billed by semester US students - \$1004, International students - 657(fall), 919(spring)		Very small
SUNY Potsdam	<a href="https://www.potsdam.edu/about/administrative-offices/international-education-programs/international-students-scholars-1-17">https://www.potsdam.edu/about/administrative-offices/international-education-programs/international-students-scholars-1-17</a>	\$85/year-Canadian students with provincial coverage from Canada , \$1113/year - international students		157

**From:** Clarkson Announcements announcements@clarkson.edu   
**Subject:** Next Phase of Strategic Planning – Responding to the Strategic Framework  
**Date:** March 5, 2021 at 2:45 PM  
**To:** all\_faculty\_staff\_all\_campuses all\_faculty\_staff\_all\_campuses@clarkson.edu

*Message from President Tony Collins and Provost Robyn Hannigan*

## **GOLDEN KNIGHTS RISE**

**The Strategic Framework & Next Phase of Strategic Planning**

# Clarkson University Strategic Plan Framework

with President Anthony G. Collins  
& Provost Robyn Hannigan

**To:** University Community  
**From:** Provost Robyn Hannigan  
**Re:** More Details, Timelines and Examples of Next Action Items

With the support of both the Board of Trustees and the President, I am delighted to share Clarkson University's strategic framework. The framework captures input from across campus garnered over the past 18 months resulting in a collective vision for Clarkson's evolution into the future and the creation of an aligned and living strategic plan we are calling "Golden Knights Rise." The framework integrates opportunity and action across the institution from academics to budget structures to master plan and beyond. Threaded throughout Golden Knights Rise, sustainability and diversity, equity, inclusion, & belonging (DEIB) remain our synergistic guiding principles.

### **Next Steps.**

- **The Opportunity:** We recognize that demands on our time and the weariness of virtual meetings makes the suggestion we fast-track strategic planning unpalatable. We also are all too aware that higher education is at a pivot point and that our long-term success resides in bold and innovative action now. With these in mind, we are looking for early adopters, those who are willing to imagine our exciting new future now while asking all members of our community to start regenerative thinking so that when we can be together in person again we are bubbling over with ideas.
  - Starting now, we are calling on colleagues in Academic Affairs, Chief Inclusion Office, Athletics, and Student Affairs to respond to the framework and propose bold, necessary actions we should take over upcoming years. However, these bold actions cannot be implemented in silos whether divisional or unit-based. The challenge is to respond to the framework by engaging across units and

in collaboration with partners across the entire organization.

- Importantly, this is the first step in building the plan. We are now putting "flesh" on the framework that will be refined and defined over the next several months. Those who can share ideas now, please do. Those who need to await a less stressful time but will join in in the summer, no worries we await your great ideas!
  - We want this next stage to be 'fun' for all participants and provide a broad opportunity to apply our collective wisdom and entrepreneurial spirit to proposing responses to the framework's goals and strategies.
- **The Approach:** Athletics, Chief Inclusion Office, Student Affairs, and Academic Affairs (each school, institute, TCS, and the Honors Program as well as the common experience committee), will form working committees who will lead the division/unit's response to the strategic framework. Ideally, the working committee should have no more than 6 members, to keep it manageable, of which three must be from outside of the unit and at least one of these from outside of the division. Remember, committee members are NOT the only ones that will be engaged in responding to the strategic framework but will be the working team who reaches out to all unit members and appropriate partners and subject matter experts to collect input and provide feedback.
  - **The "Final" Product:** To begin, we are currently looking for one "big idea" from each school/institute and division. We know there will be more than one great idea and we will continue to solicit ideas over the coming months as well as convene in person to 'see what sticks'. In this first round, we want to capture the top of the mind idea from each group. A template is outlined below. We will begin gathering final products in late March into April. One-pagers will be passed to an ad hoc committee of the faculty senate who will review and ask clarifying questions. Those ideas we've received may be shared with the Board of Trustees at the May meeting. A second round solicitation will launch at the end of May with the hope we can meet in person to discuss ideas from both rounds and work across the university community to identify strategic actions.

**Timeline**

<b>End-February</b>	<b>March 30</b>	<b>April 10</b>	<b>April 20</b>	<b>May 1</b>	<b>May 14</b>
Release of Framework and begin work	Submit 1-pagers to Senate ad hoc committee for review	Edits to 1-pagers and continued stakeholder engagement	1-pagers shared across divisions for additional feedback and edits	1-pagers submitted to Provost for President review and feedback	1-pagers shared with community
<b>June 1</b>	<b>August 15</b>	<b>September 10</b>	<b>September 20</b>	<b>September 30</b>	<b>October</b>
Next Round Solicitations	Submit 1-pagers to Senate ad hoc committee for review in September	Edits to 1-pagers and continued stakeholder engagement	1-pagers shared across divisions for additional feedback and edits	1-pagers submitted to Provost for President review and feedback	1-pagers shared from both rounds with community and with Board of Trustees

**Response to the Strategic Framework Template**

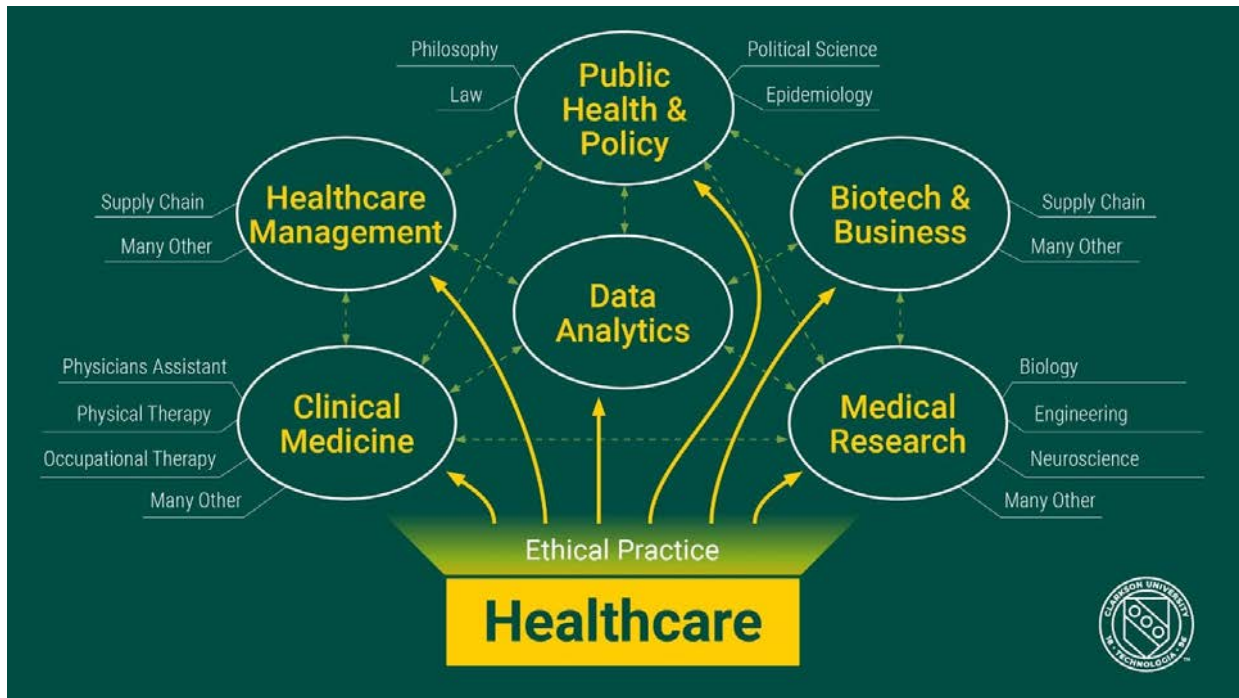
1. Division/Unit Name
2. Committee members and home division/unit
3. Which strategic goal(s) are you tackling?
4. What strategy(ies) are you focusing on?
5. What is your winning scenario?
6. How does your winning scenario reflect and support Clarkson Values?
7. What divisions/units are essential to being successful?
8. What are your metrics of success?

In addition to the above, each 1-pager must be accompanied by a graphic that represents the scenario and its connections in and out of the division/unit.

Here is an example of one group that has begun to outline their response to the framework.

**Sample graphic (courtesy of Founding Dean Lenn Johns, Lewis School of Health Sciences)**





Clarkson  
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For Internal Circulation



CLARKSON UNIVERSITY

GOLDEN KNIGHTS RISE  
STRATEGIC PLAN FRAMEWORK

MARCH 2021

A large, dark, textured image of a knight's helmet and shield, serving as a background for the title. The helmet is on the left, and the shield is on the right. The shield has a circular emblem in the center. The entire image is set against a dark teal background.

Clarkson

# Executive Summary

This document summarizes the strategic planning work that was conducted over the last eighteen months. The document reflects the input and feedback of many faculty and staff members who participated in strategic planning committee meetings and campus open forums. Much of the language contained in this document has been previously socialized with the campus community.

It is important to understand what this report contains and what it doesn't contain. This report is not a finalized strategic plan. It does not specify detailed strategic initiatives with associated measurable strategic objectives. There are no numbers or strategic targets associated with enrollments, revenues, retention, research expenditures, diversity goals, new program offerings, etc. This is intentional as the campus community has not yet been asked for specific proposals in these areas.

Rather, the report captures the issues and concerns that many felt Clarkson will face in the coming decade, articulates what success looks like at the university level in approximately a decade from now, and presents a framework of high-level strategic principles and goals that the University community felt are needed for Clarkson to be successful. Collectively, this information comprises a framework that can be used to guide the Clarkson community throughout the next stage of strategic planning.

In the next stage, the President and Provost will task academic affairs, student affairs, and athletics to partner to “put the flesh on the bones” of the strategic framework outlined in this report. Other University units will be similarly tasked to propose strategic actions and objectives guided by this strategic framework.

In summary, we will continue to work as a campus community to develop a detailed and comprehensive strategic plan through additional strategic planning “cascades” using the work done to date as a guiding framework. This process will ensure that the decisions and investments we make in the coming months and years are strategically prioritized, vetted against our strategic framework, and are supported by a strategic and tactical action plan to accelerate Clarkson's role and reputation as a leader in higher education.

## THIS DOCUMENT IS ORGANIZED AS FOLLOWS:

### Building on a Solid Foundation

This section presents background information on Clarkson's previous strategic plans.

### A Time to Be Bold — Addressing the Competitive Climate Assessment

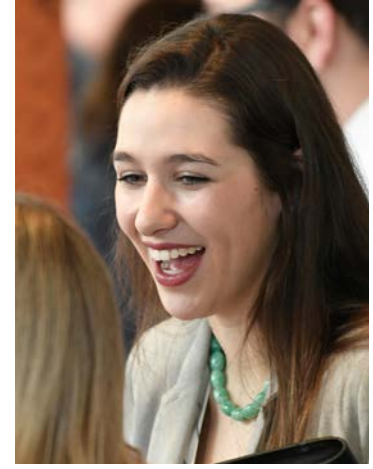
This section presents a number of challenges that Clarkson will face in the coming decade.

### The “Winning” Scenario

This section describes in a broad way what success will look like if Clarkson addresses its challenges.

### A Strategic Framework for Clarkson University

This section outlines the high-level strategic principles and goals that the University community felt must be embraced to realize the winning scenario.



# Building on a Solid Foundation

Before discussing the challenges ahead and how to address them it is worth reflecting on Clarkson University's two previous strategic plans: *Evolution to Excellence* and *Clarkson@125*.

These plans served Clarkson well in laying a solid foundation for the future. Under *Evolution to Excellence* and *Clarkson@125* the University has seen revitalization and expansion. Renovations both on the hill and downtown on the Potsdam campus have brought significant improvements and enhancements to many academic and residential buildings. The acquisition of the Beacon campus and the Capital Region Campus positioned Clarkson to broaden its reach, expand its graduate offerings, and advance critical corporate partnerships.

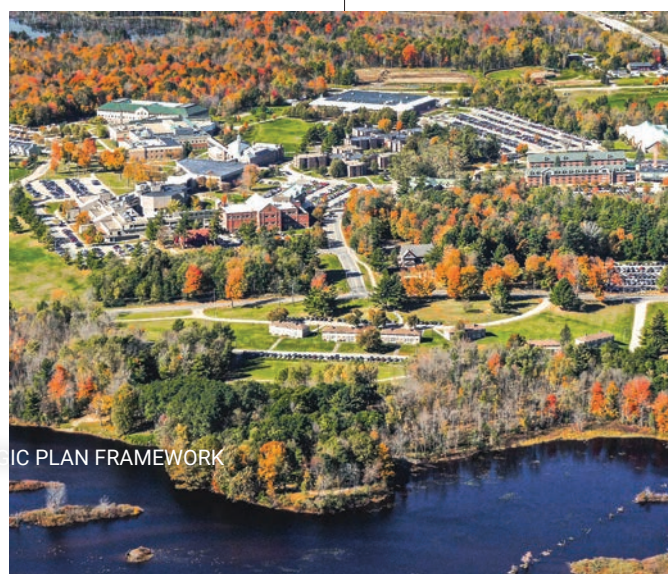
Under these plans two new schools and two new institutes were added to our academic portfolio. The strategic expansion of health science programs led to the establishment of the Earl R. and Barbara D. Lewis School of Health Sciences. The acquisition of the Capital Region Campus expanded our graduate offerings and led to the founding of the Graduate School.

The additions of the Institute for the Sustainable Environment and the STEM Education Institute support transdisciplinary academic and research programs in important areas of University strength.

Over the time frame of both plans, the size of the combined graduate and undergraduate student bodies nearly doubled and philanthropic giving to the University increased significantly. Under these plans, unrestricted giving more than doubled from \$1.5M per year to over \$3M per year, planned and deferred gift commitments to the Annie Clarkson Society grew dramatically and currently exceed \$100M, and the capital investment in revitalizing our facilities exceeded \$180M over the last ten years alone.



GOLDEN KNIGHTS RISE STRATEGIC PLAN FRAMEWORK



CLARKSON UNIVERSITY | 3

# A Time to be Bold — Addressing the Competitive Climate

Clarkson’s institutional identity and portfolio of programs is strong and appropriate for the modern economy. Nevertheless, there are serious issues facing higher education that must be addressed with boldness and intentionality if we are to thrive in the years ahead.

This competitive climate assessment captures some of the specific challenges that Clarkson will face in the coming decade. Whether or not the competitive climate assessment is proven completely accurate is not the point. The point is that while Clarkson is strong, it is not immune to the very real threats facing higher education.

Even more to the point is the fact that time is of the essence — Clarkson must challenge the status quo, embrace innovation, and respond boldly and decisively to the changing landscape of higher education in order to thrive in the coming decade. Accelerating the pace of change and the elevation of excellence at Clarkson is more critical now than ever. Why?

Prior to COVID-19 there was widespread recognition that factors including demographic changes, escalating costs, and technological disruption would reshape the landscape of higher education in ways that would be challenging and painful for many institutions.

For example, Harvard Business School Professor Clayton Christensen’s economic analysis of institutions of higher education led to his prediction that “50 percent of the 4,000 colleges and universities in the US will be bankrupt in 10 to 15 years.” This may or may not come true, and we hope it does not. However, it is true that there are very real threats to higher education that are being accentuated and accelerated by COVID-19.

The Association of Governing Boards (AGB) statement on innovation in higher education warned that the status quo is not sufficient for the continued success or viability of institutions of higher education. Despite clear warning signs from AGB and others, it is likely that many universities will struggle to innovate and be nimble. Existing academic policies, structures, hierarchies, governance, and entrenched attitudes and power structures create real barriers to successfully innovating in higher education.

How an institution is positioned and how it responds to the challenges ahead will either accelerate innovation and success or will lead to consolidation and loss. Understanding the changing landscape of higher education and the competitive challenges that lie ahead is the first step to responding boldly and decisively in ways that will ensure Clarkson thrives in the coming decades.

*The following Competitive Climate narrative summarizes some of the competitive issues that Clarkson will face over the next decade. The majority of this narrative has been previously socialized during campus open forums.*

Over the next decade, undergraduate education will remain an important part of Clarkson’s core identity while the University continues to advance and grow its residential, healthcare, and professional graduate education programs and to elevate its research reputation and impact.

**“It’s about creating the environment that success can be built within.”**

—Erik Backus

Clarkson will continue to rely on revenue from undergraduate tuition, room, and board for the majority of its operating budget. A changing landscape in higher education will require diversifying revenue beyond these traditional sources. Demographics in the northeast, Clarkson's traditional undergraduate recruiting region, will not be in Clarkson's or anyone's favor over the next decade with fewer high school students graduating and going to college. Clarkson will face increasing competitive pressure from not only traditional private northeast competitors like RIT, RPI, and WPI, but also from the SUNY system which will aggressively increase their STEM investment and presence, particularly in engineering, over the next decade.

The cost of higher education will remain a concern for many families considering Clarkson and will continue to be a prohibitive barrier for some families. K-12 student preparation for university study will continue to be an issue that will impact student success and retention, particularly over the next couple of years due to the impact COVID-19 is having on student learning.

No one will sit still over the next decade with respect to online teaching and learning. COVID-19 has forced every university in the country to reconsider how they educate their students. Universities that do not fully embrace and integrate online teaching into the residential learning environment in the wake of COVID-19 do so at their own peril. The convergence of generational cultural changes and the widespread

adoption of online teaching and learning due to COVID-19 will make both students and families more comfortable with online teaching and learning modalities into the foreseeable future. Families will challenge the traditional tuition cost structure for any instruction offered online and universities will need to work hard to demonstrate that the value proposition of their online teaching and learning offerings is just as good, if not better than traditional course offerings. While technology is becoming ubiquitous, access to technology from the home will remain a challenge for some of our students.

Working professionals will continue to need convenient, affordable, and quality educational programs that they can pursue while working full-time to advance their careers. These programs will be paid for through either employer-provided tuition benefit programs or, increasingly, through individual employee investment. Employers will increasingly provide tuition support only for "employer-approved" programs that have a well-defined value proposition for the employer. Business sectors that are likely to support "employer-approved" programs are those that face significant employee turnover due to large numbers of anticipated retirements or those that understand the need to train their workforce to adopt and adapt to new and emerging technologies like artificial intelligence and machine learning. In the absence of an employer tuition benefit, working professionals will seek the lowest-cost most convenient provider



that offers programs to advance their career. The latter will include many large well-known universities that have made multi-million dollar investments in distance education to support a low-tuition/high-enrollment online education business model.

The US will remain the higher education provider of choice for international students seeking the best undergraduate and graduate education. Wealthy international families will continue to invest in sending their children to the States for undergraduate degrees, often paying full tuition. International graduate students will continue to seek TA and RA support to subsidize their studies. The volatility of the international student market will remain sensitive to the political climate in the US and to the impact of COVID-19.

Job placement will continue to be one of the most important proxies of a university's long-term success and reputation. Technology will continue to shape the jobs of the next decade and a small number of large technology companies will continue to dominate the modern economy. Access to affordable healthcare will remain a challenge, particularly in underserved regions. Universities must prepare their students to enter an increasingly technical workforce. Artificial intelligence, machine learning, robotics, and other advanced technologies will continue to impact the number and types of jobs available. Many traditional jobs will begin to disappear due to the widespread adoption of these emerging technologies, reshaping the modern workforce. Both lower-level jobs and certain high-tech jobs across all employment sectors will be affected further bifurcating the workforce by technology skill set. Opportunities to modernize existing degree programs and to develop new degree programs to address these trends emerge. The rapid pace of technological change will make it challenging for faculty and programs to keep pace with industry needs.

Employers will accelerate the trend of narrowing their recruiting efforts to specific "target schools." Targeting will not be just aimed at schools that produce students who have the right degrees and education. Targeting also will be aimed at schools that graduate a sufficiently diverse pool of students in the fields for which they need to hire. The diversification of the faculty, staff, and student body will continue to be a significant challenge and will require intentionality that is time consuming and expensive.

Advancing research will continue to be an expensive and competitive endeavor. Contributing factors include the high cost of supporting experimental work, the need to provide a robust graduate curriculum to prepare students for state-of-the-art research, and the ambition of most universities — even second- and third-tier branch campuses of state universities — to advance their research agendas. Most universities continue to celebrate traditional research output (e.g., grant expenditures, publications, citations, etc.). Basic and applied research that requires interdisciplinary solutions become even more important to solve the challenging "wicked problems" that need to be addressed to make the world a better place. Universities that gain a reputation for research impact will be those that intentionally and routinely translate their research to societal and economic good. The translation of research favors large universities in urban areas with established entrepreneurial and venture capital communities. Research royalties will continue to come primarily from breakthroughs in pharmaceuticals, advanced materials, and software with new royalty opportunities in the areas of artificial intelligence, machine learning, and robotics.

The prediction that many small universities will struggle financially is playing out and is being accelerated by COVID-19. This will drive innovation and consolidation in higher education in ways that are new and disruptive and feel uncomfortable to many.

**"We don't just provide opportunities, we make those opportunities matter."**

—Robert Thomas



## The “Winning Scenario”

Before addressing how Clarkson must respond to the challenges presented above it is instructive to think about what success will look like in a decade or so.

The following “winning scenario” was developed based on strategic planning committee work and input from multiple campus open forums. It describes an aspirational future state of Clarkson approximately a decade from now. It is a synthesis of faculty and staff responses to the question, “What does it look like when Clarkson is doing its best?” This “winning scenario” will inform the strategic actions that Clarkson must take to thrive in the coming decade.

The winning scenario presented below is broadly defined. We have not proposed specific metrics for success associated with this scenario. Rather, we have drafted a narrative that synthesizes the aspirational hopes that the campus community articulated for Clarkson through committee work, open forums, and other feedback.

Identifying metrics and measures of success associated with the aspirational goals articulated below is important but is premature at this point since these have not yet been discussed as a campus community. This will be done as we work together through the next stage or “cascade” of strategic planning to develop a finalized strategic plan.

### **THE WINNING SCENARIO — A HIGH-LEVEL DESCRIPTION OF AN ASPIRATIONAL FUTURE STATE FOR CLARKSON A DECADE FROM NOW**

The fiscal health of the University is strong, the reach and impact of the University has grown significantly, and the academic reputation of Clarkson has never been stronger. Clarkson is a nationally recognized innovator in higher education that is known foremost for the quality and distinctiveness of its innovative educational programs, the quality of its research and scholarship, and the success of its alumni. Clarkson holistically prepares its students for a lifetime of professional and personal success and societal impact.

### **Academics**

Clarkson University is recognized for its diverse, inclusive, and healthy learning environment and students graduate with a sense of purpose and an understanding of the impact they can make in the world with their Clarkson education, and a passion to do so.

Clarkson has developed and marketed a distinctive personal and personalized educational experience that clearly differentiates us from our competitors and is the primary reason students choose to attend Clarkson. A cornerstone of the “Clarkson Education” is a highly coupled curricular, co-curricular, and student life experience.



Everyone is an educator at Clarkson — faculty and staff work as a team to educate, advise, and mentor our students both inside and outside of the classroom, offering the personal attention that enables our students to achieve more than they realize they are capable of. All employees who interact with students have and maintain the knowledge and skills to create a positive experience for students of all backgrounds, and to deliver the best education and advising both inside and outside of the classroom through Clarkson’s novel educator development and training program.

Clarkson encourages the risk taking that faculty and staff must take to advance curricular and pedagogical innovation and leadership has removed operational barriers to innovation. Clarkson has embraced curricular and co-curricular flexibility and practical real-world problem solving to foster individualized learning and to ignite individual passions. Credit-bearing competency-based co-curricular learning experiences support accelerated degree completion, attract students from non-traditional market segments, and open the doors for corporate educational partnerships.

Clarkson faculty and staff are able to teach in classrooms, laboratories, and living spaces that have been modernized to support technology-assisted teaching and learning. By enacting bold strategies to capitalize on technology-enhanced education, Clarkson significantly grows its distance education enrollment, which diversifies its revenue generation and extends its geographic reach and reputation.

Clarkson has leveraged its distance education technology investment to effectively recruit students. Technology-enabled personalized interactions between prospective students and our faculty, staff, and alumni complement traditional on-campus student recruitment strategies to attract the best students from around the country — and from around the world. This has extended Clarkson’s geographical recruiting reach, and the

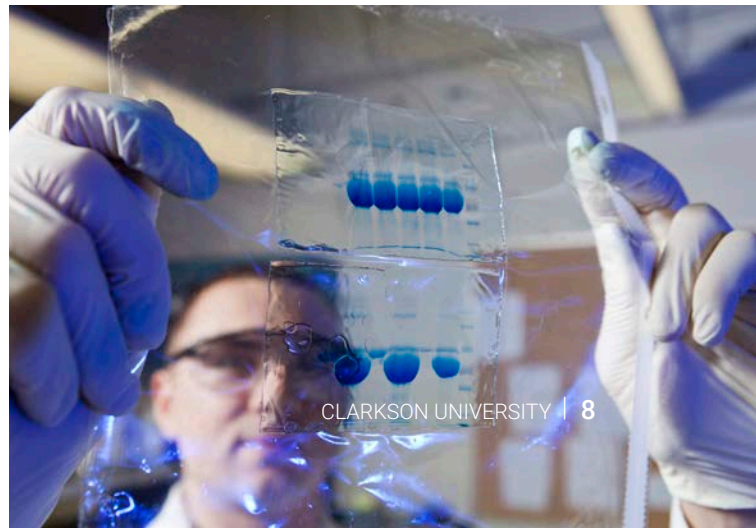
strategy to intentionally attract students with unique and desirable backgrounds to become student body “change agents” has accelerated the development of a more diverse, inclusive, and healthy intellectual learning community.

## Research and Scholarship

Clarkson University is known for doing fundamental and applied research and scholarship that matters. Clarkson’s basic and applied research reputation and impact have grown significantly by doubling down on its four research thrust areas and addressing the “wicked problems” that must be solved to make the world a better place. Clarkson has aggressively promoted University expertise through venues such as The Conversation, and faculty experts are consulted regularly by outside organizations seeking expert opinions.

Clarkson has made significant investments in its research infrastructure including strategically targeted shared computational and experimental facilities. Faculty hiring is focused on attracting teacher-scholars who want to work in research teams to address the most challenging transdisciplinary problems.

Clarkson has developed a bold approach to research partnerships and research translation that embraces team-based research and leverages alumni networks and industry partnerships. Newly instituted workload equity and release policies allow Clarkson to be nimbler and more responsive than other universities in enabling faculty researchers to address grant opportunities, to partner with industry, and to accelerate the success of startups.



## Work Environment and University Operations

Clarkson University is a great place to work. Clarkson has delivered on its promise of diversity, equity, and inclusion and its employees benefit from a rich offering of professional and career development programs that enable employees to realize their full professional potential.

The financial health of the University is strong. Clarkson enjoys robust undergraduate and graduate enrollments with resultant revenues that support healthy operating budgets. Clarkson is a well-run organization that is known for its leadership in using modern data science to analyze its operations and to support transparent operational and strategic decision-making. Clarkson is dedicated to human, social, economic and environmental leadership and sustainability in everything it does, empowering its employees to contribute to the institution's long-term success and affordability while making our local communities and the world a better place. Clarkson is recognized as an exemplary community citizen in our local communities.

Clarkson has seized on opportunities to grow the size and reach of the University. Distance and online learning technology was expanded to grow the size and reach of programs offered to working professionals and to accelerate the progress of our full-time students who wish to graduate early or pick up an extra degree. Mergers and acquisitions were considered on a case-by-case basis through the lens of fiscal responsibility, institutional identity and reputation, staffing, and other resource availability. Several key partnerships were advanced as a result.

## Alumni and Corporate Engagement

The demand for Clarkson graduates soars as they demonstrate time and again their distinctive ability to solve “wicked problems” and to work effectively in a team-based environment. Employers rave about the Clarkson alumni that they hire and they actively encourage and support their employees, non-Clarkson alumni included, to pursue additional training and graduate work offered by Clarkson.

Clarkson alumni are known for their willingness to collaborate and learn skills outside of their immediate disciplines. Clarkson has deepened its relationship with its alumni through a portfolio of traditional and innovative programs that have not only social, but also academic, co-curricular, and extracurricular ties. Clarkson has leveraged modern technology to provide personal and personalized ways to advance alumni loyalty, engagement, and giving. As lifelong learners our alumni return to Clarkson to gain skills and experiences that advance their careers and expand their horizons. Clarkson alumni retain a deep and continuous engagement with the University throughout their lives and philanthropic giving to Clarkson has increased significantly, transforming the University.

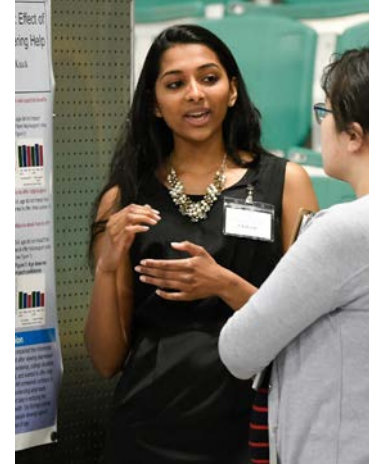
In summary, Clarkson has enhanced its reputation through unabashed communication of the “Impact of Investment” (IOI) that Clarkson brings to society. This resonates with potential students, faculty, and staff increasing the demand for a Clarkson education or a career at Clarkson. While many other institutions of higher education have struggled, Clarkson has thrived.

**“Clarkson provides transformative, enabling, personal mentoring so you can find and pursue your passion.”**

—Kathleen Issen

# A Strategic Framework for Continued Planning

The “winning scenario” is exciting and ambitious — what do we need to do to get there? This section presents a strategic framework that will guide the University in developing programs that will lead to achieving the winning scenario.



The framework consists of **three overarching strategic operating principles** and **five broad strategic goals**. The strategic operating principles are aligned with Clarkson’s identity and values and collectively they form the lens through which we will evaluate all strategic initiatives that will be proposed as we move forward. The strategic goals were identified and developed with significant faculty and staff input and they have been previously socialized, discussed, and edited to incorporate faculty and staff feedback. Underneath each strategic goal are specific strategies that support the strategic goals.

At this point in the planning process many of the strategies are general. Some are obvious and are aligned with what we currently do and some are new. The list of strategies is neither specific nor comprehensive — it is likely that additional strategies will emerge and will be added to this strategic framework as we continue the strategic planning process. There are no measurable strategic objectives presented in this report. That is, there are no numbers or strategic targets associated with enrollments, revenues, retention, research expenditures, new program offerings, etc. This is intentional. Specific, measurable, attainable, relevant, and time-bound (SMART) objectives must be developed by the individual units in the next “cascades” of strategic planning. We are not done.

## Overarching Strategic Operating Principles

The following strategic operating principles are aligned with Clarkson’s identity and values and collectively they form a lens through which we will evaluate all strategic initiatives.

- **Clarkson will challenge the status quo and act boldly** to strengthen Clarkson’s position as a leader in STEM-focused education.
- **Clarkson will commit to sustainability in all aspects of its operations** to ensure the long-term success of the institution.
- **Clarkson will embrace diversity, inclusion, equity, and belonging** on all of our campuses to create an environment where all people feel accepted, respected, and valued.

## Strategic Goals

The following strategic goals and strategies are consistent with the actions Clarkson will need to take to achieve the “winning scenario.” At this stage of planning the list of strategies is neither specific nor comprehensive — it is anticipated that additional strategies will emerge as we continue the strategic planning process and define the metrics against which we will measure success.

**STRATEGIC GOAL #1:  
ACADEMIC AND STUDENT LIFE**

Clarkson will offer a distinctive educational experience grounded in our position as a STEM-focused institution that is recognized for its outstanding value and healthy intellectual and social environment and that creates lifelong success and lasting connections to the University.

- **Strategy 1.1** – Clarkson will develop, deliver and market a distinctive integrated curricular and co-curricular educational experience that clearly differentiates us from our competitors.
- **Strategy 1.2** – Clarkson will extend its recruiting reach through technology-enabled personalized interactions to recruit a more diverse student body and support a more inclusive, and healthy intellectual learning community.
- **Strategy 1.3** – Clarkson will enhance the residential and online learning experience by becoming a recognized leader in evidence-based pedagogical innovation in experiential teaching and learning.
- **Strategy 1.4** – Clarkson will enhance the residential academic experience by expanding the quality and impact of its athletics, community service, and extracurricular programs with an emphasis on promoting a healthy social and living and learning environment that leverages our regional location.
- **Strategy 1.5** – Clarkson will deepen its relationship with its alumni through a portfolio of traditional and innovative programs that have not only social, but also academic, co-curricular, and extracurricular ties.

**STRATEGIC GOAL #2:  
RESEARCH AND SCHOLARSHIP**

Clarkson will increase the impact of our basic and applied research and scholarship through transdisciplinary, problem-focused research and innovation.

- **Strategy 2.1** – Clarkson will strategically focus its investment in established basic and applied research focus areas while embracing best practices in team-based research to increase its research impact.
- **Strategy 2.2** – Clarkson will develop programs designed to intentionally and regularly pursue technology transfer of its basic and applied research to increase its research impact.
- **Strategy 2.3** – Clarkson will increase its graduate student recruiting effectiveness.
- **Strategy 2.4** – Clarkson will update its research facilities.

**STRATEGIC GOAL #3:  
WORK ENVIRONMENT**

Clarkson will develop, retain, and celebrate faculty and staff excellence.

- **Strategy 3.1** – Clarkson will develop and deliver a faculty and staff development program to support the highest level of teaching excellence.
- **Strategy 3.2** – Clarkson will develop and deliver a leadership development program to prepare its current and future academic and administrative leaders.
- **Strategy 3.3** – Clarkson will develop and deliver a recruiting and retention program designed to build a more diverse and inclusive workplace.
- **Strategy 3.4** – Clarkson will commit to community stewardship both internally and with our community partners.

**“Solving real world problems, open ended questions –  
not homework problems solved many times before”**

–Jeanna Matthews

## STRATEGIC GOAL #4: OPERATIONS

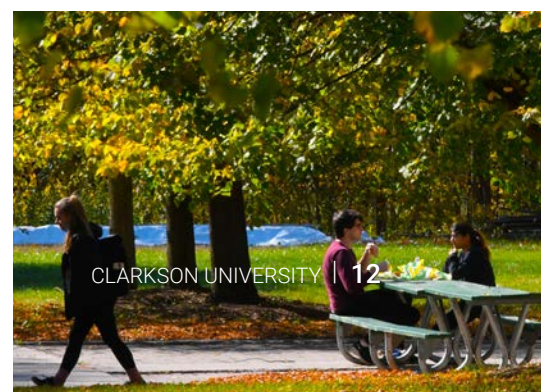
Clarkson will commit to operational excellence in everything we do.

- **Strategy 4.1** – Clarkson will advance its leadership position in environmental sustainability in all aspects of its operations to make our institution, our local communities, and the world better places.
- **Strategy 4.2** – Clarkson will commit to the continuous improvement of its business practices and processes to make them more efficient, sustainable, transparent, and effective.
- **Strategy 4.3** – Clarkson will commit to fiscal sustainability to keep its education affordable and accessible.
- **Strategy 4.4** – Clarkson will embrace modern data science to analyze its operations and support transparent operational and strategic decision making.

## STRATEGIC GOAL #5: EXPANSION AND GROWTH

Clarkson will assess expansion and growth on a case-by-case basis through a lens of fiscal responsibility, institutional identity and reputation, staffing, and other resource availability.

- **Strategy 5.1** – Clarkson will use distance and online learning technology to grow the size and reach of programs offered to working professionals and to accelerate the progress and to support the personalized education of our full-time students.
- **Strategy 5.2** – Clarkson will consider mergers and/or acquisitions on a case-by-case basis following a process approved by the Board of Trustees.



# Conclusion

This report summarizes the work done to date on Clarkson's new strategic plan. The document reflects the input and feedback of many faculty and staff members who participated in strategic planning committee meetings and campus open forums. This report is not a finalized strategic plan. It does specify detailed strategic initiatives with associated measurable strategic objectives. There are no numbers or strategic targets associated with enrollments, revenues, retention, research expenditures, new program offerings, etc. This is intentional as the campus community has not yet been asked for specific proposals in these areas — that is the next step.

Rather, the report 1) captures the issues and concerns that many felt Clarkson will face in the coming decade; 2) articulates what success looks like at the university level in approximately a decade from now; and 3) presents a framework of high-level strategic principles, goals, and strategies that the University community felt must be pursued in order for Clarkson to be successful.

Collectively, the aspirational winning scenario and strategic principles and goals presented in this report comprise a framework that will be used to guide Clarkson through the next stages of strategic planning. In the next stage the President and Provost will task academic affairs, student affairs, athletics, and other University units to partner to “put the flesh on the bones” of the strategic plan by proposing specific initiatives and metrics that support this overarching strategic framework.

In summary, we will continue to work as a campus community to develop a detailed and comprehensive strategic plan through additional strategic planning “cascades” using the work done to date as a guiding framework.

**“We don't just learn by doing, we learn by solving.”**

—Tom Langen

**“Mentoring/educating to unleash the latent potential with passion and compassion”**

—Santosh Mahapatra



**Clarkson™**

Agenda Items  
with supporting documentation



Initial Discussion of Recommendations of *ad hoc* Committee on  
Faculty Governance (Alex Cohen)

[Senate Governance Proposals 2021](#)