GEORGE MASON UNIVERSITY

Patriot Tiger Team Report on Fall 2020 Options

Patriot Tiger Team Members: Michelle Marks (Chair), David Burge, Deb Crawford, Bill Dracos, Renate Guilford, Megan Laures, Germaine Louis, Rene Stewart O'Neal, Tom Owens, Lisa Park, Rose Pascarell, Keith Renshaw, Julie Zobel

Project Management Team: Marc Austin, Janette Muir, Teresa Finn, Amber Hannush, Robin Parker, Sarah Parnell, Tony Pillari

Friday, May 8, 2020

Dear President Holton,

The Patriot Tiger team members are pleased to submit our report to you, Provost Ginsberg and Sr. Vice President Kissal. We hope it will be a useful analysis to guide decision-making for fall, 2020. We recognize that these are difficult times and there are no easy answers.

During our three-week process, we received feedback and guidance from many members of the Mason community, and we want to recognize their contributions:

Academic Advising Liaisons
Chairs' Council
Deans' Council
Emergency Operations Group
Executive Council
Facilities Management
Faculty Senate Executive Committee
Housing and Residence Life
Instructional Continuity Working Group
Kennedy and Company
Mason Core Committee
Mason Faculty Affairs and Development Brain Trust
Office of the Provost Senior Team
Online Learning and Stearns Center Leadership
Policy Management Group
Research Continuity Working Group
Safety, Emergency, and Enterprise Risk Management Leadership Team
Student Health Services
Student Health Services Executive Committee
Transfer Advisory Committee
Undergraduate Education Team
University Life Cabinet and Unit Leaders
Individual faculty, staff, and students who shared perspectives

Sincerely,

Patriot Tiger Team
Michelle Marks (Chair)
David Burge
Deb Crawford

Bill Dracos
Renate Guilford
Megan Laures
Germaine Louis
Rene Stewart O'Neal
Thomas Owens
Lisa Park
Rose Pascarell
Keith Renshaw
Julie Zobel

Project Management Team
Marc Austin
Janette Muir
Teresa Finn
Amber Hannush
Robin Parker
Sarah Parnell
Tony Pillari

Executive Summary

The Patriot Tiger Team on AY2021 was formed to consider options and formulate specific recommendations with respect to Mason's programs, activities and operations for AY2021. The team was asked to prepare and present a report to the Executive Council by May 8, 2020.

The Patriot Tiger Team was asked to consider: 1) the instructional and research programs of the university, 2) administrative and necessary infrastructure functions, 3) housing and university life issues, 4) activities and events, 5) facilities and university services, 6) fiscal implications and economic impact, 7) brand and reputational impact and 8) other critical and pertinent university functions related to the operation of the university.

At the launch of the process, the Patriot Tiger Team pledged to put the health, safety, and well-being of the Mason community at the forefront in its analysis of all options. This principle will guide Mason's planning for AY2021 and will be balanced with fulfilling the university's mission and economic realities of maintaining operations.

The Tiger Team dedicated a substantial amount of time to developing and narrowing a list of viable options for the university's decision making. Deliberations incorporated Mason campus feedback and Mason data and research, which was reviewed against and included reviews of other universities' responses and the latest national and regional models of COVID spread. The process revealed four options:

Option 1: Return to Campus – Scaled Down
Returning to campus with physical distancing measures and expanded online offerings; fewer numbers of students housed on campus.

Option 2: Return to Campus – Scaled Up
Returning to campus with physical distancing measures and expanded online offerings; more students housed on campus.

Option 3: Split Curriculum
The majority of courses are designed as both on-campus and online. Students who are able to come back to campus (up to the population in which social distancing rules can be enforced) can choose to enroll in either format.

Option 4: Online Only
All courses online. All staff and students telework, only essential employees on campus for the fall semester.

Serving as an advisory body, the Tiger Team worked to evaluate and represent the impact of each option, rather than prioritize or rank them. It is important to note that all options lead to

developing more classes in an online format and with the intent to support research on campus and in the field consistent with public health directives. Recognizing the uncertainty of the times, options 1 – 3 provide the ability to pivot back to online should outbreaks occur or public health guidance mandate further changes. There will be a need for greater faculty and student support in an online environment, and for the implementation of disciplined approaches to safeguard public health on campus. Resources must be directed towards areas that will promote faculty and student success health and well-being. Regarding online instruction, the team notes that any investment made in this area is a strategic investment in the future, in support of the university's mission.

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Introduction

The coronavirus pandemic has forced higher education leaders into uncharted terrain. Across the United States, schools and colleges are facing difficult decisions regarding how to return to campuses as national, state, and local leaders relax shelter-at-home restrictions, non-essential businesses re-open, and public life resumes albeit in modified ways. It is universally understood —there are no easy answers. It is imperative that colleges and universities prioritize the health and safety of students, faculty, and staff. It is also true that the shuttering of college campuses has great implications for thousands of individuals who are dependent on the education, research, employment, and partnerships that higher education provides. Nationwide, higher education leaders are looking to find the right balance between how to best protect campus communities and fulfill their missions in a world that is depending on what colleges and universities provide —graduating educated and engaged citizens, developing solutions to health, policy, and technology challenges, and producing research that helps the world to better understand, treat, and ultimately cure this virus.

The need to strike the right balance is what prompted Mason's president, provost and senior vice president to establish the Patriot Tiger Team. Inspired by the highly specialized NASA engineers who came together and saved the ill-fated Apollo 13 mission, a "tiger team" is a term generally applied to a specialized, cross-functional team assembled to solve a complex problem. Mason's own Tiger Team was asked to consider and recommend specific options with respect to programs, activities and operations for AY2021 semester. Informed by data, best practices and knowledge and feedback from different areas of the university, the team adopted a systematic and comprehensive approach to reviewing and identifying viable options.

At the launch of this process, the Patriot Tiger Team pledged to put the health, safety, and well-being of the Mason community at the forefront in its analysis of all options. This principle will guide Mason's planning for the Fall 2020 semester and will be balanced with fulfilling the university's mission and economic realities of maintaining operations. With this in mind, it is important to reiterate the thresholds that government and public health officials have stated are necessary for returning to campus or resumption of community activities, with which Mason will align:

- Regionally there is a decrease or downward trend in new and confirmed cases for a minimum of 14 days prior to students moving into residence halls and the start of any in-person classes,
- Local testing capacity is at a level that, at a minimum, supports testing symptomatic individuals and their close contacts,
- Local tracing capacity is sufficient to trace contacts for all new cases and their close contacts,
- The capacity of the healthcare system is steady and capable of, at a minimum, safely treating all patients and new COVID-19-related admissions,

- The capacity of housing is sufficient to accommodate all residential students who need to be isolated and quarantined, and
- Personal protective equipment is available in sustainable quantities for regional and university health care workers.

As a university focused on increasing and expanding pathways to education and supporting research and innovation that promotes the resilience, health and wellbeing of the public at large, Mason's goal is always to provide maximum value to all of its stakeholders. As such, the Patriot Tiger Team's efforts were aimed at identifying the most expansive and inclusive approach that can be offered in accordance with public health guidance.

However, in consideration of the guiding principle and guidance from the Centers for Disease Control and Prevention (CDC) that limiting close contact between individuals is the primary tool for slowing virus transmission, two decisions were made at the onset of this process. First, as Virginia's largest public university, ensuring the recommended physical space necessary to reduce the risk—in classrooms; in research, scholarship, and creative spaces; in libraries and residence halls, and in other shared spaces– would be virtually impossible in the normal operations of a university of our size. Because the team could not identify a safe path for all students, faculty, and staff to return in the fall 2020 semester, a fully open campus or a "business as usual" approach was eliminated as an option for analysis.

Second, our path forward includes an expectation that some research activities will return to campus or field sites when the governor lifts shelter-at-home restrictions and permits the partial to full re-opening of non-essential businesses in our region. Campus operations and research activities should be paced at all times by public health directives and the university's ability to support the health and safety of its community through physical distancing, the provision of Personal Protective Equipment (PPE), and other related measures. All those who are able to do their work from home are strongly encouraged to continue to do so for the foreseeable future.

This document presents impact analyses for four options: three that involve opening the campus for instruction to some extent and a fourth that maintains an all-online instructional mode of delivery. All options involve a thoughtful, phased approach to restarting research and creative activity on campus, as well as limiting large events and gatherings.

Any plans to increase on-campus activities must align with trusted national, state, and regional public health guidance that incorporates population testing, contact tracing, surge capacity, and planning for potential outbreaks necessitating isolation and quarantine practices. Nonetheless, it should be acknowledged that incidence cases of COVID-19 infections are expected and will be appropriately managed in a timely manner.

The university also should be prepared to implement a broad range of risk mitigation strategies that include behavioral expectations and practices, engineering controls, and protective equipment and supplies. The success of any mitigation strategy will greatly depend upon the

university's ability to influence and change individual behavior, which is known to be challenging, and to access and purchase appropriate cleaning, PPE, and testing supplies. Changing human behavior, which plays a large part in slowing and stopping disease spread, will require time and resources to educate, train and deliver clear and transparent communication with the goal of encouraging community members to protect themselves and those around them. The health and safety of the Mason community is dependent upon shared behavioral changes.

This analysis reflects the best information about various aspects of the COVID-19 pandemic available at the time of the report's submission. The university's response will evolve as knowledge and information on virus spread and preventive measures becomes available along with any new guidance for health and safety. Through this analysis and the engagements and processes that will follow, the university will find and refine a model that works best for students, staff, faculty, and the broader Mason community. Working together, the university will find creative ways to continue to deliver its unique brand of accessible, innovative education and research to a community and world that needs Mason's presence— now more than ever.

Guiding Principle: Supporting the Health, Safety, and Well-Being of the Mason Community

George Mason University pledges to support the health, safety, and well-being of the Mason community. This principle will guide our planning for AY20-21 and will be balanced with fulfilling the university's mission while also being mindful of sobering economic realities.

To uphold this principle, we recommend risk-mitigation strategies for our community that include behavioral expectations and practices, engineering controls, and protective equipment and supplies. These strategies address risk factors for exposure such as proximity (e.g., time and space) and behavior (e.g., physical distancing) with attention to individual risk of infection (e.g., age, underlying health conditions).

Mason's strategic return to campus aligns with trusted national, state, and regional public health guidance that incorporated population testing, contact tracing, surge capacity, and planning for potential outbreaks necessitating isolation and quarantine practices.

Health and Safety Summary

The health, safety and well-being of the Mason community is a top priority for the university. To support the health of our community, and in alignment with guidance from national and state public health experts, the university will introduce health and safety precautions to support on-campus or the resumption of university operations.

Specific procedures address the following areas: (1) work practices and occupancy restrictions; (2) illnesses and suspect COVID-19 exposures; (3) face coverings; (4) signage and visual cues; (5) training; (6) university spaces; (7) space cleaning routines; (8) events; (9) travel; and (10) materials handling and shared equipment.

Selected recommended precautions include:

- Only those employees who are required to be on campus to conduct their work should return to campus. All other employees should continue to telework.
- High risk subgroups of the Mason community (e.g., co-morbidity) and those who are ill must remain at home and stay away from campus.
- Any faculty, staff, student, or contractor diagnosed with COVID-19 by their healthcare provider should notify Human Resources (faculty/staff), Student Health Services (students) or Environmental Health and Safety (contractors).
- Employees, students, and contractors who have been told by a healthcare provider or health official to quarantine or isolate should stay at home.
- When on university business outside the home, all faculty, staff, and students should maintain a six-foot separation from other individuals whenever possible.
- Meetings should continue virtually whenever possible to prevent contact and free up meeting spaces for possible use as classrooms, research spaces, or offices for employees who are displaced from shared offices.
- All students, faculty, and staff must wear face coverings in accordance with CDC guidelines whenever they are in university common areas (e.g., hallways, classrooms, recreational facilities, work areas, shuttles, elevators, restrooms, retail spaces) or any other areas where it may be difficult to maintain a minimum six-foot distance from other persons.
- All students, faculty, and staff must complete an online health and safety COVID-19 training and complete a commitment to comply with sound public health practices before returning to campus or to university work in the field.
- Future travel and events restrictions will be based on state mandates, CDC guidance, and the university's risk assessment of travel conditions and exposure risks.

These recommended precautions were developed with the assumptions that adequate cleaning and sanitizing supplies will be available and that our community will practice good hygiene such as frequent and thorough hand washing. They reflect analysis and research by state and national

public health agencies and are based on data and information available at the time of the report's submission. Recommendations may change as we receive updated guidance. University leaders will be updated as health and medical information evolves. Please see the Appendix for the full list of Health and Safety Precautions for Resumption of University Operations.

Community Support Statement

George Mason University is committed to the health, well-being, and success of all of members of the university community and recognizes the unique challenges the COVID-19 pandemic can create for our most vulnerable populations.

During this period of upheaval and distraction, we must remain focused on Mason's enduring values and institutional identity:

Our students come first.
Our top priority is to provide students with a transformational research and learning experience that helps them grow as individuals, scholars, researchers, and professionals.

We are an inclusive thriving community.
We nurture a positive, collaborative, and inclusive community that contributes to the well-being and success of every member.

As we prioritize the health and safety of the Mason community, we must remain committed to staying true to these values for students, staff, and faculty.

Serving Mason students, particularly those most vulnerable, in the current environment of physical distancing and virtual instruction challenges Mason to be flexible and creative.

We pledge to prioritize the success of all our students and we will measure our success through their academic and professional achievement, through their engagement and a sense of belonging, through their intellectual discovery, Mason pride, and overall health, well-being, and safety.

Our efforts will ensure that Mason's legacy in this pandemic will be one of pride and community through a creative, flexible, and responsive planning approach for a stellar learning environment.

Research, Scholarship, and Creative Work

Faculty, staff and students engaged in research, scholarship, and creative work (hereafter "research") that can be accomplished at home should continue to do this work at home until the public health emergency ends. Furthermore, high risk subgroups of the Mason community (e.g., co-morbidity) and those who are ill must remain at home and away from campus or other research environments that put them or others at risk.

The university will support a phased ramp-up or ramp-down of research activities on campus and in field or clinical settings guided by public health conditions and independent of the selection of instructional options described elsewhere in this report.

Five phases of research operations—consistent with the university's broader on-campus ramp-up plan—are anticipated:

Phase 1 is defined by public health conditions that include *shelter-at-home directives, rising local COVID-19 hospitalizations, limited access to COVID-19 diagnosis and antibody testing, essential businesses only open, and limited supplies of PPE*. Research and research-related activities permitted to occur on campus or in the field during this phase include ONLY COVID-19 research, national security research, animal husbandry, and maintenance of critical research instruments, data, and equipment. Research conducted in this phase represents ~5-10% of "normal" on-campus research capacity. No human subjects research requiring in-person engagement is permitted during this phase. All research that can be done remotely from home should be, including all seminars, group meetings, etc.

Phase 2 is defined by public health conditions that include *flattening or dropping local COVID-19 hospitalizations, PPE shortages remain a concern, COVID-19 testing capacity increasing but not near full capacity needed, and gradual re-opening of non-essential businesses*. The university will prioritize "time-sensitive" research activities on a case-by-case basis during this phase, and will ramp-up on-campus and field-based research consistent with sound public health practices including the use of heightened cleaning, staggered access, and physical distancing protocols. "Time-sensitive" research includes: research close to completion or seasonally driven; research where junior researchers are close to a critical milestone, e.g. degree competition, end of term of appointment, tenure decision; completion of research with grant end dates within three months of the request to resume on-campus or field-based research, and competitive renewals; and other research deadlines (e.g. book contracts, art exhibitions, performance deadlines, etc.). No human subjects research requiring in-person engagement is anticipated during this phase. Research activities permitted in this phase will represent ~10-35% of "normal" on-campus or field-based research capacity. All research that can be done remotely from home should be, including all seminars, group meetings, etc.

Phase 3 is defined by public health conditions that include *local COVID-19 hospitalizations continue to decrease, COVID-19 testing near maximum capacity needed, PPE more widely available but supply chain issues still exist, and further relaxation of public health restrictions*. A gradual expansion of the number of researchers working on campus and in the field is anticipated on a case-by-case basis during this phase while ensuring compliance with sound public health practices including the use of heightened cleaning, staggered access, and physical distancing protocols. The increasing use of libraries, archives, labs, studios, performance spaces and collections is anticipated for a controlled number of researchers. Human subjects research requiring in-person engagement may resume under limited conditions. On site or field- or clinical-based research activity will be at ~35-65% of normal capacity during this phase. All research that can be done remotely from home should be, including all seminars, group meetings, etc.

Phase 4 is defined by public health conditions that include *new cases of COVID-19 are low, COVID-19 testing is at maximum needed capacity, PPE availability has returned to normal, and further relaxation of public health restrictions*. Further expansion of research conducted on-campus, in field and in clinical setting will be permitted on a case-by-case basis. Access to libraries, collections, studio spaces, performance spaces and labs is permitted compliant with evolving sound public health practices. Additional human-subjects research requiring in-person engagement may resume under limited conditions. On site or field- or clinical-based research activities will be at ~65-85% of normal capacity during this phase. All research that can be done remotely from home should be, including all seminars, group meetings, etc.

Phase 5 is defined by public health conditions that include *vaccine widely available and used in combination with widespread testing and identification of new COVID-19 cases with quarantining, and/or widespread availability of therapeutics that reduce morbidity, no or minimal public health restrictions*. All campus and field- and clinical-based research activities may resume.

All faculty researchers seeking to resume research on-campus or in field or clinical settings during Phases 1-4 must seek university approval to do so. The university will publish guidelines for faculty requests to resume on-campus or field- or clinical-based research. When resumption of research activities is permitted, specific working conditions will be established, including type of work, density, staggered work schedules, physical distancing, cleaning/hygiene protocols, and other requirements. Periodic inspection of authorized spaces will be conducted to help ensure compliance with practices that prioritize the health and wellbeing of the researcher community. Should public health conditions change for the worse in any phase, research projects will be ramped down accordingly.

Process for Analysis

On April 22, 2020, Provost Mark Ginsberg convened the first meeting of the Patriot Tiger Team. The Patriot Tiger Team was charged with identifying and evaluating options for programs, activities, and operations for fall 2020. The team was asked to prepare and present a report to the Executive Council by May 8, 2020.

The Patriot Tiger Team was asked to consider: 1) instructional and research programs of the university; 2) administrative and necessary infrastructure functions; 3) housing and university life issues; 4) activities, athletics, and university events; 5) facilities and university services; 6) fiscal implications and economic impact; 7) brand and reputational impact; 8) and other critical and pertinent university functions related to the operation of the university.

The Patriot Tiger Team kicked off the process by discussing and establishing the principles that would guide the exploration and analysis. The initial meeting also resulted in the identification of the key factors that would drive the process to identify viable options.

Subsequent meetings dedicated a substantial amount of time to developing and narrowing a list of viable options. Deliberations incorporated Mason campus feedback, and data and research, which was reviewed against other universities' responses and the latest national and regional models of COVID-19 spread.

The process ultimately revealed four options. The team then launched an effort to gather data and input from key groups around the campus to produce an analysis of the short- and long-term impacts of each option.

Options Analysis

OPTION 1

Return to Campus – Scaled Down

Return to campus with physical distancing measures and expanded online offerings; fewer numbers of students housed on campus.

OPTION 2

Return to Campus – Scaled Up

Return to campus with physical distancing measures and expanded online offerings; more students housed on campus.

OPTION 3

Split Curriculum

All courses are designed as both on campus and online. Students who are able to come back to campus (up to the population in which physical distancing rules can be enforced) can choose to enroll in either format.

OPTION 4

Online Only

All courses online. All staff and students work remotely, only essential employees on campus for the fall semester.

Fall Open Options

Conditions	Option 1 Return to Campus – Scaled Down *Campus partly opened with fewer students housed on campus.*		Option 2 Return to Campus – Scaled Up *Campus partly opened with more students housed on campus.*	Option 3 Split Curriculum *All courses designed as both residential and online. Students able to come to campus (per enforceable physical distancing rules) and choose to enroll in either format.*	Option 4 All Online *All courses online. All staff and students telework, only essential employees on campus for the fall semester.*
Students Housed on Campus	Option 1A: 1,705	Option 1B: 2,890	3,828	3,828	NA
Distancing *(drives seating capacity)*	10x10	10x10	10x10	10x10	NA
Transition Time Between Classes *(for classroom cleaning)*	60 mins	60 mins	60 mins	60 mins	NA
Available Class Hours *(both beyond 8AM-10PM, M-F & weekends)*	Full Weekday + 16 Weekend Hours	Full Weekday + 16 Weekend Hours	Full Weekday + 26 Weekend Hours	Full Weekday + 26 Weekend Hours	NA
Hybrid Courses *(classes meet F2F once/week on campus)*	33% of courses could be delivered in Hybrid format	33% of courses could be delivered in Hybrid format	66% of courses could be delivered in Hybrid format	66% of courses could be delivered in Hybrid format	NA
Key Differences in Fiscally-Related Assumptions	NA	NA	• Online Development costs double versus Option 1 • Higher campus traffic versus Option 1	• Increased online development costs • Reduced campus traffic vs. Options 1 & 2 due to more online options • More online versus Options 1 & 2	NA

Option Summary

Factors	Option 1 Return to Campus – Scaled Down *Campus partly opened with fewer students housed on campus.*		Option 2 Return to Campus – Scaled Up *Campus partly opened with more students housed on campus.*	Option 3 Split Curriculum *All courses designed as both residential and online. Students able to come to campus (per enforceable physical distancing rules) and choose to enroll in either format.*	Option 4 All Online *All courses online. All staff and students telework, only essential employees on campus for the fall semester.*
Students Housed on Campus	Option 1A: 1,705	Option 1B: 2,890	3,828	3,828	NA
Enrollment Overall*	-9.7%	-9.7%	-8.1%	-7.8%	-24.6%
In-State	-9.7%	-9.7%	-8.8%	-8.5%	-25.7%
Out of state	-9.8%	-9.8%	-4.9%	-4.5%	-18.6%
Housing	27.3% occupied -$29.3M in revenues	46% occupied -$17.1M in revenues	61.2% occupied -$8.4M in revenues	61.2% occupied -$8.4M in revenues	0% occupied -$49.3M in revenues
Dining	-$18.6M in revenues	-$13.1M in revenues	-$8.6M in revenues	-$9.2M in revenues	-$29.4M in revenues
New Online Courses	1,052	1,052	2,103	2,103	3,187
Revenue	$1,088M	$1,105M	$1,131M	$1,132M	$979M
Expenses	$1,187M	$1,191M	$1,200M	$1,205M	$1,174M
Financial Impact AY21	**-**$99.9M	**-**$86.6M	**-**$69.0M	-$72.6M	-$194.8M

**Enrollment is compared against a modified enrollment assumption of a total of 31,725 FTE—an early FY21 planning assumption—and not compared to Fall 2019 actuals.*

Option 1A: Return to Campus – Scaled Down

Campus partly opened with fewer numbers of students housed on campus (1,705 beds—1 room, 1 bath per student)

- **Instruction** – Full Weekday, + 16 Weekend Hours; 33% of courses will be delivered in hybrid format; 60-minute transitions
- **Tuition & Fees** – 10% additional discount (freshmen and sophomores) residing 50 miles from campus taking all classes online
- **Enrollment*** – -9.7% decrease; In-State -9.7% / Out-of-State -9.8%
- **Housing** – 27.3% occupied (6,254 total beds); loss of $29.3M in revenues
- **Dining** – Loss of $18.6M in revenues
- **New Online Courses** – 1,052
- **Faculty** – Colleges will need to determine the critical course needs for each department and which courses must be offered through the residential model. Many classes will have to be offered online or reduced to smaller sections.

Full-Time Students

Online	In-State	1,997
	Out-of-State	691
On-Campus	In-State	22,012
	Out-of-State	3,939

Financial Impact

Revenue: $1,088M
Expenses: $1,187M
Overall Impact FY21: -$99.9M

Online Development

Cost: $14.8M
(included in expenses)

Health and Safety

Cost: $17.4M**
(included in expenses)

***Reflects a 3X increase in cleaning costs over FY19* ($5.26M)

**Enrollment is compared against a modified enrollment assumption of a total of 31,725 FTE—an early FY21 planning assumption—and not compared to Fall 2019 actuals.*

Option 1B: Return to Campus – Scaled Down

Campus partly opened with fewer numbers of students housed on campus (2,890 beds—1 room, shared bathroom, more bathroom cleaning)

- **Instruction** – Full Weekday, + 16 Weekend Hours; 33% of courses will be delivered in hybrid format; 60-minute transitions
- **Tuition & Fees** – 10% additional discount (freshmen and sophomores) residing 50 miles from campus taking all classes online
- **Enrollment*** – -9.7% decrease; In-State -9.7% / Out-of-State -9.8%
- **Housing** – 46.2% occupied (6,254 total beds); loss of $17.1M in revenues
- **Dining** – Loss of $13.1M in revenues
- **New Online Courses** – 1,052
- **Faculty** – Colleges will determine the critical course needs for each department and which courses must be offered through the residential model. Many classes will have to be offered online or reduced to smaller sections.

Full-Time Students

Online	In-State	1,997
	Out-of-State	691
On-Campus	In-State	22,012
	Out-of-State	3,939

Financial Impact

Revenue: $1,105M
Expenses: $1,191M
Overall Impact FY21: -$86.6M

Online Development

Cost: $14.8M
(included in expenses)

Health and Safety

Cost: $17.4M**
(included in expenses)

***Reflects a 3X increase in cleaning costs over FY19* ($5.26M)

**Enrollment is compared against a modified enrollment assumption of a total of 31,725 FTE—an early FY21 planning assumption—and not compared to Fall 2019 actuals.*

Option 2: Return to Campus – Scaled Up

Campus partly opened with more numbers of students housed on campus (3,828 beds)

- **Instruction** – Full Weekday, + 16 Weekend Hours; 66% of courses will be delivered in hybrid format; 60-minute transitions
- **Tuition & Fees** – 10% additional discount (freshmen and sophomores) residing 50 miles from campus taking all classes online
- **Enrollment*** – -8.1% decrease; In-State -8.8% / Out-of-State -4.9%
- **Housing** – 61.2% occupied (6,254 total beds); loss of $8.4M in revenues
- **Dining** – Loss of $8.6M in revenues
- **New Online Courses** – 2,103
- **Faculty** – Colleges will determine the critical course needs for each department and which courses must be offered through the residential model. Many classes will have to be offered online or reduced to smaller sections.

Full-Time Students

Online	In-State	1,498
	Out-of-State	691
On-Campus	In-State	22,762
	Out-of-State	4,189

Financial Impact

Revenue: $1,131M
Expenses: $1,200M
Overall Impact FY21: -$69.0M

Online Development

Cost: $19.7M
(included in expenses)

Health and Safety

Cost: $17.4M**
(included in expenses)

***Reflects a 3X increase in cleaning costs over FY19* ($5.26M)

**Enrollment is compared against a modified enrollment assumption of a total of 31,725 FTE—an early FY21 planning assumption—and not compared to Fall 2019 actuals.*

Option 3: Split Curriculum

All courses designed as both residential and online. Students able to come to campus (per enforceable physical distancing rules) can choose to enroll in either format

- **Instruction** – Full Weekday, + 26 Weekend Hours; 66% of courses will be delivered in hybrid format; 60-minute transitions; 3,828 beds
- **Tuition & Fees** – 10% additional discount (freshmen and sophomores) residing 50 miles from campus taking all classes online
- **Enrollment*** – -7.8% decrease; In-State -8.5% / Out-of-State -4.5%
- **Housing** – 61.2% occupied (6,254 total beds); loss of $8.4M in revenues
- **Dining** – Loss of $9.2M in revenues
- **New Online Courses** – 2,103
- **Faculty** – Faculty prepare for both online and residential courses. Departments will need to decide how to offer the right combination of courses. Faculty need to be able to pivot their courses to the online environment, to manage student expectations. Departments may split the obligations (e.g., two faculty teach different modality of the same course).

Full-Time Students

Online	In-State	1,498
	Out-of-State	691
On-Campus	In-State	22,837
	Out-of-State	4,214

Financial Impact	Online Development	Health and Safety
Revenue: $1,132M Expenses: $1,205M Overall Impact FY21: -$72.6M	Cost: $24.7M *(included in expenses)*	Cost: $17.4M** *(included in expenses)* ***Reflects a 3X increase in cleaning costs over FY19* ($5.26M)

**Enrollment is compared against a modified enrollment assumption of a total of 31,725 FTE—an early FY21 planning assumption—and not compared to Fall 2019 actuals.*

Option 4: Online Only

All courses online. All staff and students telework, only essential employees on campus for the fall semester.

- **Instruction** – All online
- **Tuition & Fees** – 10% additional discount (freshmen and sophomores) residing 50 miles from campus taking all classes online
- **Enrollment*** – -24.6% decrease; In-State -25.7% / Out-of-State -18.6%
- **Housing** – 0% occupied (6,254 total beds); loss of $49.3M in revenues
- **Dining** – Loss of $29.4M in revenues
- **New Online Courses** – 3,187
- **Faculty** – Faculty prepare for their courses to be taught fully online. Asynchronous delivery is most desired, but some synchronous learning will be needed. Designing labs and performance-based classes will be challenging.

Full-Time Students

Online	In-State	19,757
	Out-of-State	4,179
On-Campus	In-State	0
	Out-of-State	0

Financial Impact	**Online Development**
Revenue: $979M Expenses: $1,174M Overall Impact FY21: -$194.8M	Cost: $24.7M *(included in expenses)*

**Enrollment is compared against a modified enrollment assumption of a total of 31,725 FTE—an early FY21 planning assumption—and not compared to Fall 2019 actuals.*

Option Analysis Notes

The following factors apply to all options:

- Research – R&D Revenue same as AY20; ramp-up/ramp-down, based on:
  - on public health directives and
  - by any staffing, cleaning equipment supply chain and/or social distancing constraints

- Activities & Events – Mason will follow guidelines provided by the Department of Public Health with regard to public gatherings. A review committee will contribute further guidance. An Events Exception Committee has been convened to review and analyze risk for on-campus events in alignment with the university's on-campus activity status.

- Athletics – With regard to athletic events, Mason will follow the guidance and expectations laid out by the NCAA and A-10 Division.

Key Assumptions for Financial Modeling

Financial	Assumption
Tuition and Fees	• Differential tuition not charged for on-campus versus on-line courses, with one, targeted exception: approximately 1,900 Freshman and Sophomore students will be offered a 10% tuition and fee discount as an enticement to remain enrolled if they cannot be housed on campus. • All student fees remain the same as those submitted to the BOV for FY21 and have been prorated based on estimated enrollment for each scenario considered. • Application of mandatory student fees may be reassessed should we move to an on-line only model.
Institutional Aid	• Institutional Aid may increase from $60M/year to $65M/year (versus FY21 Pre-COVID baseline of $75M/year).
State Funding	• All forms of state support remains constant relative to AY20.
Salary Expenses	• Salary expenses remain flat relative to AY20.
Capital Outlays	• Capital outlays remain constant relative to the FY21 Baseline Pre-COVID budget.
Online Development Costs	• Faculty receive a stipend for developing on-line courses.

Health and Safety	Assumption
PPE and Cleaning	• PPE (masks) provided for faculty staff and students. Additional PPE as required for select groups. • Cleaning of every classroom after each session seven days a week.
Testing and Tracing	• Cost of testing covered by health insurance. • Use of a combination of human tracers and mobile.

Recruitment and Marketing Innovations for Fall 2020

1. **Sample Online Classes with potentially reduced cost summer enrollment for credit.** We have identified seven Mason classes that will offer two free modules in May with an option for each class to be completed for credit during the summer B session. This free trial will be extended to all admitted new undergraduate students. Allowing prospective students the ability to try some of Mason's finest online classes will make them feel more comfortable taking more online classes as part of their first semester at Mason.

2. **Patriot Platoon: An Online Cohort Model to the first-year experience.** Create a branded first-year experience for any new Mason student with a primary residence greater than 50 miles from the Fairfax Campus who chooses to take all of their courses online. This will attempt to both reduce the demand on constrained housing but also build confidence that being an online learner at Mason will contain essential elements of campus life. Features of this program include:

    a. Dedicated success coaching
    b. Cohort-driven course selection
    c. 10 percent tuition/fees discount
    d. Weekly events for students
    e. Coaching for parents for students living at home managed by the Center for the Advancement of Well-Being

3. **Visiting Student Recruitment.** Creation of a dedicated campaign for Northern Virginia students admitted to Mason in the last three years but enrolled elsewhere. Many students are likely to be displaced from their home institution and/or parents are likely interested in having their children close by during uncertain times. We expect this offer to be appealing and to drive more non-degree enrollment. We are working with academic units to make sure there are available sections in courses that are likely to transfer back and fulfill core degree requirements at their initial college/university.

4. **Alternative Enrollment options for international students.** We are preparing a pair of options for international students who might not be able to attend in-person because of visa or travel restrictions.

    a. Expand student enrollment at Mason Korea to allow students from South Korea, Vietnam, and/or China to begin their first-year studies and transfer to Fairfax.
    b. Expansion or packaging of online offerings.

i. We are working with Wiley to offer the first semester of the master's degree in computer science online to capture a large number of international students, especially those from India, who are admitted but constrained by their ability to get a visa appointment.
ii. Creation of a Virtual Online Pathway program through INTO Mason.

5. **Virtual Recruitment Events.** Mason will host a second Virtual Spring Preview event on May 14, following up to a very successful event hosted on April 23, which saw more than 2,000 visitors. The Office of Admissions events team has also been conducting training sessions for individual academic units to operate their own events in the coming weeks.

Conclusions

- This is an unprecedented time in the history of George Mason University requiring an unprecedented response to lead with compassion and agility as we move forward.

- The health, safety, and well-being of students, faculty and staff is a high priority for decision-making and often is in tension with economic impacts; additional safety precautions are a strategy to balance these priorities.

- Returning to campus, in any capacity, will increase contact and, therefore, disease transmission and outbreak. College campuses are inherently high risk because they are high touch, highly interactive, and mobile with densely-populated living and learning environments. The risk of subsequent waves of infection will remain until a vaccine is available for public inoculation.

- We should only reopen Mason's residence halls and conduct face to face instruction if the thresholds that government and public health officials have set for the return to campus or resumption of community activities are met.

- If we elect to allow the community to return to campus, we must consider how to protect all population subgroups, including those with high-risk profiles such as older adults, those with co-morbid health conditions, and vulnerable students (e.g., minority, underinsured, non-traditional, DACA, homeless). Any final plans should include provisions for faculty, staff, and students with special vulnerabilities to request accommodations as needed

- All options lead to more classes developed for online delivery, and build critical capabilities for a pivot should public health reports and requirements mandate further changes.

- All options anticipate a phased approach to resumption of on-campus or field research (and potential subsequent or reduction, if needed) guided by public health guidance and directives and the university's ability to support physical distancing and other sound public health practices to support the health and safety of the research community.

- Any investment made in online instruction is a strategic investment in the future and critical to fulfilling the university's mission.

- Regardless of the AY20-21 operational approach selected, there will be a need for greater faculty and student support in the virtual environment thus, resources must be directed towards areas that will promote faculty and student success.

Appendix:

Patriot Tiger Team on Fall 2020 Options Goals and Charge

The goals for and charge to the *Patriot Tiger Team on Fall 2020 Options* are to consider options and formulate specific recommendations with respect to Mason's programs, activities and operations for the fall 2020 semester.

The *Patriot Tiger Team* will review and consider the multiple issues, challenges and opportunities that both underlie and are overarching to the need for comprehensive, well-informed, timely and systemically-based decisions by the university with respect to any and all contingency plans.

Given both the critical importance and urgency of these issues, the *Patriot Tiger Team* is asked to prepare and submit their report to the Executive Council of the University for their review and consideration.

The underlying principle that will drive the work of the *Patriot Tiger Team* is the safety, health and welfare of Mason's community – faculty, staff, students and others who engage with the university. The *Patriot Tiger Team* also should consider: 1) the instructional and research programs of the university, 2) administrative and necessary infrastructure functions, 3) housing and university life issues, 4) activities, athletics and university events, 5) facilities and university services, 6) fiscal implications and economic impact, 7) brand and reputational impact and 8) other critical and pertinent university functions related to the operation of the university.

Where practical, consideration also should be given to how options identified for the fall 2020 semester will impact Mason in the short, medium and long term.

The *Patriot Tiger Team* is encouraged to consult widely, and in depth, with critical stakeholders at Mason, and others who can inform their deliberations, and provide in their report:

- A description of each option for the fall 2020 semester
- Necessary resources for each option
- Impact of each option – short, medium and long term
- Underlying assumptions driving each option and specifically what we do not know (the critical uncertainties)
- Additional information and/or data needed
- Risks and possible unintended consequences of each option
- Fiscal implications and economic impact associated with each option

Other considerations

The *Patriot Tiger Team,* which must by necessity be small in number to be intensely focused and timely in accomplishing its task, will be led by Vice-President for Academic Innovation and New Ventures, Michelle Marks. In addition, project management coordination will be provided by Marc Austin, Amber Hannush, and Janette Muir with administrative support provided by Sarah Parnell.

The *Patriot Tiger Team* will be comprised by the following Mason colleagues with knowledge of key and critical domains of university functions and operations (listed alphabetically):

- David Burge
- Deb Crawford
- Bill Dracos
- Renate Guilford
- Megan Laures
- Germaine Buck Louis
- Rene Stewart O'Neal
- Tom Owens
- Lisa Park
- Rose Pascarell
- Keith Renshaw
- Julie Zobel

Recommendations to Support Student Success

Who is Most at Risk in Online Environments?

VULNERABLE POPULATIONS

- **1st Generation:**
  - Lack of connection and support, peer engagement (Mason: 35%)
- **High Financial Need:**
  - Students working on their phones but without laptops. Cramped learning environments. Lack of necessary technology available for new low income students. Will see increase in financial Difficulties/food insecurity/housing insecurity (Mason: Pell 30%)
- **Students with Disabilities:**
  - Students with ADHD who struggle without enough structure, students with LD's who need more in-person contact with faculty to understand the material (Mason: 6% 2,000+)
- **Students with Mental Health Concerns, Increased Anxiety, Stress, Depression**
- **Students on Academic Probation**

Who is Most at Risk in Online Environments?

(continued)

VULNERABLE POPULATIONS

- **International Students:**
  - Unknown federal flexibility regarding number of online courses that can be taken
  - Quality of internet access in other countries is a risk to online education.
  - 50/50 Model introduces added complexities for new international students that would require different start dates for SEVIS processing.
  - Synchronous instruction challenging –time differences.
- **LGBTQ:**
  - Challenges with managing identities from home locations, unsupportive families, no home. (Mason: 7% 2,660)

Who is Most at Risk in Online Environments?

(continued)

VULNERABLE POPULATIONS

- **Students in research-intensive programs:**
  - Limited access to research facilities
  - Limited access to data and software platforms
- **Student Parents and Primary Care Takers**
- **Victims of Sexual and Interpersonal Violence:**
  - Increase in interpersonal violence with prolonged distance learning experience, i.e., students are home with their abusers. (25%)

Fall 2020: Supporting Student Success

- WELL-BEING, MENTAL AND PHYSICAL HEALTH
- ENGAGEMENT/SENSE OF BELONGING
- PERSONALIZED STUDENT SUPPORT
- FINANCIAL ASSISTANCE
- ACADEMIC AND RESEARCH SUPPORT

1. Increase Well-Being, Mental and Physical Health

- Increase development of online well-being programs and resources
- Provide open spaces on campus where students can work and connect
- Increase virtual telehealth and telemental health options but know the challenges:
  - Limited to students physically in Virginia and to concerns appropriate for modality
  - Confidentiality challenges for students receiving services virtually from home
  - Impacted by poor internet quality for some students
  - Students in remote areas: lack easy access to psychiatric or specialty care/medication management as these resources are generally concentrated in major metropolitan areas.

2. Increase Engagement/Sense of Belonging

- Form task force with every college represented to provide and share best practice/guidance on online engagement opportunities in order to:
  - Increase small and large scale virtual engagement opportunities
  - Facilitate increased student to student communication
  - Increase social media video's with short tutorials
  - See Appendix for some current examples
- Expand audio/visual technology options - to better enable simultaneous on-campus and virtual programming
- Work with instructional designers to integrate best/effective practices for online education into virtual programming (e.g. live workshops)

3. Increase Direct Student Support/Coaching

- Utilize integrated, virtual and high touch approaches to provide targeted outreach and support to students
- Proactive intervention every two weeks – professional or peer – for students in vulnerable populations and first year students
- Improve data analytics resources to best leverage this support model
  - WHY: Several studies demonstrate 'at risk' populations persist at higher rates if receiving coaching/personalized attention.
  - WHY: EXAMPLE - MASON NOVA ADVANCE retention rate for first-year in program students who are in ADVANCE/meeting with coach is 90% over first year; this compares to a 44% retention rate among a comparable cohort in their first year.
  - WHY: regularized (every 2 weeks) coaching intervention with UG students has been shown to increase retention rate by as much as 16% in first year students (Utah Study).

4. Increase Financial Assistance So Students Can Afford to Stay in School

- Continue to hire students: Both on-campus and virtual
  - Continue to fund student wage and stipend positions for undergraduate students
  - Create more graduate assistant (GRA, GTA, GPA) positions that provide both stipend and tuition support for graduate students, while also providing teaching, research, and professional experience
- Fund and continue to prioritize StayMason and COVID-19 Emergency Aid
- Increase financial aid

5. Increase Academic Supports

- Tutoring Services
- Writing Center
- Learning Services – Academic Coaching
- Learning Resource Center (for multilingual learners)
- Provide video orientation to online learning and resources
- Create virtual living-learning communities
- Creation of graduate student cohorts to promote academic support and sense of belonging
- Creation of online learning communities for graduate students, both interdisciplinary and within departments/programs

Appendix: (Sample) of Some Virtual Engagement Activities

Examples in last month:

- CVPA events
- Virtual Health and Science Nonprofit Career week (more attendees this year than last)
- Handshake internship/job/career info: over 5500 unique student logins
- Handshake: 6800 internship/job apps submitted in April
- Get what you're Worth: Negotiating Job offers and Salaries for graduate students
- Q&A with John Finlay from Tiger King (473 zoom audience members)
- E-sports virtual gaming - reaching students from more isolated populations

Planned for students by students:

- Instagram Crochet Tutorial (yep, crochet) had 10,454 views
- Hair Dye Tutorial (1205 views)
- Quarantine fashion Tips (925 views)
- Virtual live music requests (162 views)
- Panhellenic held online live fundraiser (raised 2k)

Health and Safety Precautions

Work Practices and Occupancy Restrictions: Only those employees that are required to be on campus to conduct their work should return to campus; those at high risk for severe illness and those that are ill must arrange to remain out of class and away from work. All other employees should continue to telework. Other preventive work practices include:

- Maintain six feet separation from other faculty, staff, students, contractors, or visitors whenever possible when passing or for short (less than 15 to 30 minutes) interactions.
- Maintain 10 feet separation between desks, workstations, computer terminals, individual study areas, and other single use equipment (e.g., exercise equipment, self-serve terminals, etc.) whenever possible to promote physical distancing and minimize exposure.
- Provide 100 ft_2 per student, faculty, staff, and visitor in classrooms, work areas, and common spaces by physically moving/removing furniture, demarcating physical distance requirements with physical barriers or signage, or covering equipment to promote physical distancing and minimize exposure.
- Provide 150-275 ft_2 per person in research laboratories and remove furniture, provide floor markings, and post signage as needed to promote physical distancing and minimize exposure.
- Employees should not share offices, whenever possible.
- To reduce the overall population density in shared space at any one time, consider alternating on-site and telework days, shifting work schedules, and part-time telework.
- Meetings should continue virtually whenever possible to prevent contact and free up meeting spaces for possible use as offices for employees who are displaced from shared offices or for use as classrooms.
- Wash hands for 20 seconds using soap and water frequently throughout the day, and after contacting surfaces that may have been touched by other persons. Hand sanitizer may be used when a handwashing sink is not available.

Illnesses and Suspect COVID-19 Exposures: Continue to observe current guidance to self-monitor, precautions for contact with confirmed or suspected COVID-19 cases, actions if illness occurs, and university notification procedures of COVID-19 like illness (see Reporting and Contact to COVID FAQ). Contract tracing procedures will be conducted, exact process to be developed.

Face Coverings: All students, faculty, and staff must wear face coverings in accordance with CDC guidelines whenever they are in common areas (e.g., hallways, classrooms, recreational facilities, work areas, shuttles, elevators, restrooms, retail spaces) or any other areas where it may be difficult to maintain a minimum six-foot distance from other persons. Individuals who do not have a face covering should contact their supervisor; EHS will assist departments with obtaining and distribution of face coverings based on availability. Face coverings worn for extended periods should be laundered or hand washed at least daily using regular laundry

detergent. If face coverings are issued by the university, they become the property of the user, and are the responsibility of that individual to ensure proper laundering.

When face coverings are removed temporarily for meals or other breaks during the day, they should be placed into a labelled zip lock bag for temporary storage. Face coverings should not be shared with others.

Signage and Visual Cues: Signs will be posted in high visibility areas within each building (including common areas, restrooms, shared office spaces, classrooms, etc.) The signs will be used to communicate:

- Reminders of physical distancing, the use of face coverings, and good personal hygiene practices;
- Specific room or space occupancy limits, if applicable; and,
- Additional precautions that must be observed for unique spaces; and
- Floor markings or barrier tape may be used where necessary to promote physical distancing.

Training: All students, faculty, and staff must complete an online COVID-19 training before returning to campus. Training will be offered through Mason Leaps (for delivery and tracking). Supplemental training may be required for certain audiences (e.g., residential students, supervisors, etc.).

University Spaces: Occupancy and distancing requirements for all spaces are included in Table A. These requirements are based on the following:

- Occupancy levels for departmental and university spaces and classrooms have been reduced, based on calculated square footage required per occupant in order to maintain physical distancing at all times.
- Individual classroom and instructional laboratory spaces will be assessed by EHS and Facilities Management prior to use to verify and post maximum occupancies for each classroom.
- Shared spaces and meeting rooms should be converted to single use office spaces, or classrooms as needed.
- All occupied buildings will maintain HVAC system operation for maximum space occupancy to allow for maximum fresh air supply, regardless of reduced occupancy within the space.

Space Cleaning Routines: Routine cleaning services will be augmented with additional cleaning and disinfection activities in all areas, with varying frequency depending on the number of occupants and the space type and usage. In general, spaces with higher levels of occupants and work activity will have a higher frequency of cleaning. Cleaning by university housekeeping

services (Facilities Management, Housing and Residence Life, and contracted services) will consist of various activities described below at the frequency indicated in Table A:

- Routine cleaning: waste removal, floor cleaning and wipe-down of horizontal surfaces.
- Routine restroom cleaning: waste removal, cleaning and disinfection of floors, sinks, toilets and urinals.
- Routine cleaning of dining halls/restaurants: cleaning of food preparation areas, service lines, and dining facilities.
- Enhanced cleaning: disinfection of high-touch surfaces: wipe down of high-frequency touch points (door handles, light switches, elevator buttons, shared equipment control panels, etc.) with EPA-approved disinfectants.
- Enhanced disinfection: disinfection of horizontal work surfaces in classrooms and common areas using EPA-approved disinfectants.

Note: *Sanitizing wipes or other disinfection supplies (if available) should be provided for all classrooms and designated common areas for employees or students to clean their study/work area.*

Events: All events held on Mason campuses are cancelled until August 8, 2020, exceptions can be requested after event is registered in 25Live per University Policy 1103. Send requests for exceptions the Events Exceptions Committee at risk@gmu.edu. Events that cannot conform to physical distancing requirements in Table A must be reviewed by the Events Exceptions Committee, contact risk@gmu.edu.

Travel: Future travel restrictions will be based on state mandates, CDC guidance, and the university's risk assessment of travel conditions and exposure risks. Exceptions to the university's travel restrictions will be reviewed by the University Travel Advisory Committee.

Materials Handling and Shared Equipment: Individuals expected to collect or distribute materials throughout the workday (e.g., mail services, cashiers, retail employees) should wear disposable gloves while handling materials and wash hands, or use hand sanitizer after gloves are removed when a handwashing sink is not available. Others handling paper materials less frequently should, whenever possible, place paper materials into a quarantine area for 24 hours before handling and wash hands immediately after handling. Shared equipment should be disinfected between uses.

These precautions are in accordance with CDC/VDH guidance and best practices as of May 7, 2020.

COVID-19 Health & Safety Precautions - Table A

Environment	Maximum Occupancy	Physical Distancing	Engineering Controls	Cleaning Activities and Frequency
NOTE: The precautions provided in this table assume the use of face coverings in all environments unless otherwise indicated.				
Athletics Training Area	100 sf/person and maintain physical distancing of 6 ft at all times	Configure space to establish 10 ft distance between equipment	Reposition or remove athletic equipment separation to promote physical distancing	Routine cleaning daily; high-touch surfaces 3x per day; provide disinfectant wipes for athlete cleaning of equipment after use
Cashier/Customer Service Desk	100 sf/person and maintain physical distancing of 6 ft at all times	Configure space to maintain 10 ft distance between workstations	Provide physical barrier between employee and customer where physical interactions are required, Floor marking as necessary to indicate appropriate physical distancing	Routine cleaning daily; provide disinfectant wipes for occupant cleaning
Child Development and Child Care Centers	8 students and 2 staff per classroom	Reduce class size, and do not merge classes at start or end of day; revise playground schedule to support physical separation; limit visitors and parent entry to center; floor markings to reinforce physical distancing	Remove furniture from classrooms to match reduced occupancy; implement car line for drop-off and pick-up of children; temperature screening (<100.4 degrees) prior to drop-off	Routine cleaning daily; high-touch surfaces 3x per day; cleaning of all toys daily (immediate removal and cleaning of toys mouthed by children); provide disinfectant wipes in all classrooms and offices for use by staff

Environment	Maximum Occupancy Guidance	Physical Distancing	Engineering Controls	Cleaning Activities and Frequency
Classroom	100 sf/student and maintain physical distancing of 6 ft at all times, including when entering and exiting classrooms	Reconfigure room to establish 10 ft separation between desks or workstations	Remove or block chairs or desks to maintain physical distancing	Routine cleaning daily; high-touch surfaces and horizontal surfaces after every class
Computer Classroom	100 sf/student and maintain physical distancing of 6 ft at all times	Reconfigure rooms to establish 10 ft separation between workstations	Remove or block work stations to facilitate physical distancing	Routine cleaning daily; high-touch surfaces and horizontal surfaces after each class
Dining Hall	100 sf/student and maintain physical distancing of 6 ft at all times	Provide grab-and-go meals and takeout orders; no-buffet/self-service counters; reservations required for in-hall dining	Remove or block chairs to facilitate physical distancing	Food service cleaning continuously; high-touch surfaces 3x per day
Dining Retail	100 sf/patron for take-out only	Provide grab-and-go meals or takeout orders only; provide curbside pickup to maintain physical distancing; floor marking for food service queuing	N/A	Food service cleaning continuously; high-touch surfaces 3x per day
Elevator	2 occupants per elevator	Post occupancy limit inside elevator cars outlining; floor markings for passenger standing locations	N/A	Routine cleaning daily, high-touch surfaces 3x per day

Environment	Maximum Occupancy Guidance	Physical Distancing	Engineering Controls	Cleaning Activities and Frequency
Event Space	100 sf/student and maintain physical distancing of 6 ft at all times	Post occupancy limits inside event spaces; provide floor markings to maintain physical distancing; Events Exception Committee must review and approve all events, and may provide additional precautions	Remove or block chairs or desks to facilitate physical distancing	Routine cleaning daily; high-touch surfaces and horizontal work surfaces after each event
Laboratory - Instructional; Maker Spaces	100 sf/student and maintain physical distancing of 6 ft at all times, including when entering and exiting laboratories	Only one student per fume hood or 6 ft section of bench; no student partners or teams; benchtop and floor markings to reinforce physical distancing	Remove or block chairs to facilitate physical distancing	Routine cleaning daily; provide disinfectant wipes for instructor cleaning between labs
Laboratory - Research; Machine Shops, Prep Rooms	150-275 sf/person and maintain physical distancing of 6 ft at all times	Mark floors to identify physical distancing requirements surrounding shared equipment, if required	N/A	Routine cleaning daily; provide disinfectant wipes for researcher cleaning
Library	100 sf/student and maintain physical distancing of 6 ft at all times	Limit occupancy to maintain physical distancing	Remove or block chairs or computer terminals to maintain physical distancing at workstations	Routine cleaning daily; high-touch surfaces and horizontal work surfaces 3x per day; provide disinfectant wipes for occupant cleaning

Environment	Maximum Occupancy Guidance	Physical Distancing	Engineering Controls	Cleaning Activities and Frequency
Locker Room	100 sf/person. Close public locker rooms in non-recreation facilities (e.g., Merten Hall, etc.)	Limit occupancy; mark floors to identify physical distancing requirements	Block alternate shower stalls, sinks, bathroom stalls, and urinals to promote physical distancing	Routine cleaning daily; high-touch surfaces and horizontal work surfaces daily; provide disinfectant wipes for occupant cleaning
Meeting Space - Conference Room	100 sf/person and maintain physical distancing of 6 ft at all times	Limit in-person meetings whenever possible; consider re-purposing meeting rooms for use as offices or classrooms	Remove or block chairs to maintain physical distancing	Routine cleaning daily; high touch surfaces daily; provide disinfectant wipes for occupant cleaning after each meeting
Office, Individual	One person per office	The use of face coverings are recommended, but not required.	N/A	Routine cleaning daily; provide disinfectant wipes for occupant cleaning
Office, Shared (Open or enclosed)	100 sf/person and maintain physical distancing of 6 ft at all times	Reconfigure to achieve 10 ft separation between workstations	Use vacant meeting spaces as offices if available	Routine cleaning daily; high-touch surfaces daily; provide disinfectant wipes for occupant cleaning
Outdoor Space	Prohibit gathering in excess of CDC or VDH recommended guidance at time of implementation; maintain physical distancing of 6 ft at all times	Notify attendees of precautions (e.g., face coverings required, physical distancing precautions); Events Exception Committee will review, approve, and recommend precautions	Configure outdoor events to discourage large gatherings; provide physical barriers between event attendees	Equipment, tents, tables, etc. must be cleaned after each event

Environment	Maximum Occupancy Guidance	Physical Distancing	Engineering Controls	Cleaning Activities and Frequency
Recreation Center Training Area	100 sf/person and maintain physical distancing of 6 ft at all times	Configure space to establish 10 ft distance between equipment	Reposition or remove athletic equipment separation to promote physical distancing	Routine cleaning twice daily; provide disinfectant wipes for patron cleaning of equipment after use
Residence Hall	Room occupancy TBD; 100 sf/student in common areas and study lounges	Configure furniture in common areas and study lounges to establish 10 ft distance between students	Provide physical barriers at neighborhood desks	Routine cleaning twice daily of common areas, including shared bathrooms and study lounges; occupants clean rooms per instructions provided by Housing and Residence Life
Restrooms	Occupancy is 50% the number of sinks, rounding up	Limit occupancy to maintain physical distancing	Block every other urinal/sink/stall to promote physical distancing	Routine cleaning twice daily; provide disinfectant wipes for patron cleaning of equipment after use
Shared Resource Rooms (e.g., break room, copy room, kitchenette)	100 sf/person and maintain physical distancing of 6 ft at all times	Limit occupancy to maintain physical distancing based on configuration	Block or turn off equipment if it's not absolutely necessary	Routine cleaning, horizontal surface disinfectant and high-touch surface cleaning daily; provide disinfectant wipes for occupant use
Shuttles	50% maximum capacity, one rider per row per side of the vehicle	Reduce ridership to maintain physical distancing	Block alternate seats to allow riders to sit alone	Routine cleaning performed by contracted service provider
Student Center	100 sf/person and maintain physical distancing of 6 ft at all times	Reconfigure common areas to maintain 10 ft separation between seats, workstations and study chairs	Remove or block furniture to maintain physical distancing	Routine cleaning, horizontal surface disinfectant and high-touch surface cleaning daily; provide disinfectant wipes for occupant/user cleaning

Student common areas (e.g., study lounges, student center common areas)	100 sf/person and maintain physical distancing of 6 ft at all times	Reconfigure common areas to maintain 10 ft between seating or workstations	Remove or block furniture to maintain physical distancing; consider closing staff kitchens/breakrooms	Routine cleaning daily; high-touch surfaces and horizontal work surfaces daily; provide disinfectant wipes
Swimming Pools	100 sf/person on the pool deck	Maintain 6 ft physical distancing when not swimming; face coverings are not required when walking to and from the pool deck.	N/A	Routine cleaning daily
University Vehicles & Golf Carts	**For 2-row vehicles driving < 10 minutes**: driver + one passenger (seated in second row, opposite side); **For single row vehicles**: driver only	Maintain 6 ft physical distancing	N/A	Provide disinfectant wipes for drivers to wipe down high-touch points after each use

Contact Tracing for COVID-19

April 30, 2020

This is a brief synopsis of options for implementing contact tracing for the entire George Mason community in anticipation of bringing students, faculty and staff back to campus. It was prepared in response to a request from the Tiger Team. Irrespective of mode of delivery, use of best public health contact tracing methods would be employed to contain spread and maximize the health and well-being of our community. To this end, we build upon guidance and training protocols developed by trusted public health entities.

Overview of contact tracing & resources

As of April 29th, the US had over one million cases and nearly 60,000 deaths (CDC, April 30, 2020; https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html). Virginia has close to 15,000 known cases out of 85,000 tested (https://www.vdh.virginia.gov/coronavirus/). Assuming approximately 10% of the US population have been infected, we estimate that 90% of Mason students are currently susceptible to the virus underscoring the vital importance of active contact tracing to control spread.

Contact tracing traditionally is initiated once someone is diagnosed (i.e., case) with a communicable infection, and outbreak investigations are then launched to control the spread of the disease. Contact tracing identifies a case's contacts and notifies them of their exposure, need for quarantine and behavioral and medical guidance. Unlike more typical outbreaks which are limited in scope and contained by health departments, COVID-19 is a pandemic requiring concerted resources, in part, given asymptomatic transmission, rapid case escalation, insufficiency testing resources, and the absence of empirically-based efficacious treatments. Asymptomatic transmission appears to be driving outbreaks, requiring the early identification of asymptomatic carriers and monitoring their close contacts. Contacts need to be monitored during the incubation period to ensure the absence of disease. To this end, Mason recognizes the need to design and implement its own contact tracing to ensure the health of its community.

Guidance is available on the skillset required for building a cadre of contact tracers. These include an ability to assess self-reported symptoms, identify contacts for investigation, and follow-up of exposed contacts. Contact tracing can be done remotely by telephone or mobile apps, though in-person contact may be needed in some cases requiring the use of personal protective equipment for mitigating infection risk. In addition to analytic skills, tracers need to be culturally sensitive with good communication skills. Average pay for a community health worker is $17/hour.

The Association of State and Territorial Health Officials (ASTHO) have developed online training modules for contact tracing, which is essential in the context of physical distancing requirements. We propose adopting this 3-hour basic training program for Mason. Included in

the training are: case-based scenarios, knowledge exercises to reinforce critical concepts, FAQs, and interviewing tips, among other resources. Faculty from the College of Health and Human Services are available to oversee training and reinforce methods, and to supervise contact tracers and the quality of their work. In addition to the ASTHO course, those faculty and students who have become an approved volunteer through the Medical Reserve Corps (MRC) in Virginia may also receive training through the Fairfax County and Prince William County Health Departments.

Contact tracing personnel requirements and assumptions

Until a vaccine is available, and reliable antibody testing can affirm the number of immune individuals, contact tracing is essential to identify the contacts of individuals who have developed COVID-19, and to be able to isolate those who have been exposed. It is estimated that one person can infect two to three others, turning one case into over 50,000 cases (Johns Hopkins/ASTHO, April 2020). An estimated 100,000 contact tracers will be needed in the US to manage this effort. Preliminary estimates from Massachusetts suggests that 15 contact tracers are needed per 100,000 population. At Mason, we estimate a minimum of 40 individuals will need to be trained to conduct contact tracing as soon as cases (asymptomatic or symptomatic) are identified. This assumes that by August 2020, 70% of Mason students will be susceptible to the virus.

Overview of contact tracing protocol

The University will have a to-be-determined central office, referred to herein as the COVID-19 office. The COVID-19 office will receive all reports of both confirmed or suspected cases among the Mason community. A member of the Mason community is defined as a student, staff, faculty, or contractor. The COVID-19 office will complete a case investigation form for each confirmed or suspected case, which includes determining the time frame of infectiousness, and whether others may have exposed individuals in the Mason Community. If it is determined from the form that the infected individual exposed Mason members, then contact tracing will be initiated. The COVID-19 office will electronically transmit the form to the contact tracing group within 24 hours.

The infected individual will be contacted either by email, text or phone call to complete a detailed log of where they had been (classes, buildings, dorm rooms, etc.) and with whom they have been in contact with during the infectious period (as stated on the form).

Contact tracers will be responsible for following up with contacts of cases to provide guidance including the need for self-quarantine and, possibly, medical care. Daily monitoring of all exposed contacts will be required, possibly using the Public Health Risk Assessment Tool developed specifically for Mason's community and currently ongoing. Exposed individuals who develop symptoms will be considered suspected cases and will be instructed to initiate self-isolation or medical care, depending upon symptomology. The infectious period of these cases will be determined to guide contact tracing of these individual's contacts.

Contact tracers will need computers and/or smart phones. The science of contact tracing has evolved to include innovations in computing and telecommunications to reduce the time between case identification and public health action. For example, a variety of mobile apps are available to support contact tracers, as recently summarized.

As outbreaks increase then more contact tracers will be activated.

Three main innovations are in use around the world to facilitate contact tracing and outbreak response. In the U.S. combinations of these are in the process of being implemented at universities, counties, and private employers. The first is the use of mobile apps to conduct contact tracing remotely and more efficiently. Contact tracers are using these apps to collect information. The second uses apps for infected individuals to report contacts to health officials and to notify their contacts of their infection status. The third uses movement data from mobile phones to notify individuals that they may have been exposed (using stored movement data so that when a confirmed or suspected individual is identified, notifications are sent to cell phones that were in close contact to the case). Alemi, Wojtusiak, Pfoser, Roess, and several others at GMU are part of projects that are using these technologies for COVID-19 response. Privacy and efficacy considerations should guide evaluation of mobile technology options. Regardless of whether mobile app technology is used to support contact tracing, contact tracing performed by human personnel will be needed for individuals who do not opt-in, for clinical decision-making, and to ensure proper follow-up.

Capacity for Tracing

A survey of all faculty in the College of Health and Human Services has identified individuals who are able and willing to volunteer their assistance for contact tracing, should it be needed. In addition, undergraduate and graduate nursing students are currently serving in the call center for the Medical Reserve Corps (MRC). Other students in the College and likely across Mason are volunteering during this pandemic and they likely would be interested in being hired as contact tracers (as would other Mason students). We propose recruiting Mason students to be trained as contact tracers, as they have the necessary analytic and communication skills to trace and monitor contacts irrespective of whether tracing will be done electronically or by telephone. Students are technologically savvy and have a sense of community. Moreover, students can be rapidly hired through Mason's wage workers and trained to be ready for timely deployment. Student Health Services personnel will work closely with the COVID-19 office to perform contact tracing on students who use SHS for primary care, to ensure residential students are appropriately isolated or quarantined.

Next steps

Mason will need to decide if they wish to utilize mobile apps, people or a combination of the two for contact tracing. Other than hourly wages for student community health workers, costs for contact tracing will largely be a function of the selected modality. IT support is a consideration as is human resources and any potential legal ramifications (Although HIPPA restrictions reinforcement is loosened during national emergencies such as this pandemic, the university will

work to ensure the privacy and confidentiality of individuals.). Storage of data and privacy considerations can be addressed as contact tracing is a longstanding and critical component of best public health practices.

References

Johns Hopkins University, ASTHO; April 10, 2020. A National Plan to Enable Comprehensive COVID-19 Case Finding and Contact Tracing in the US.

Contact Tracing Estimated Costs – Residential Student Population

Example for Low Incidence

Incidence (# contacts needing tracing based upon residency size)	Entirely Human Tracing		Mobile App with Human Support Tracing*	
	N=1,705	N=3,086	N=1,705	N=3,086
1% with 15 in class (1491 & 2700)	$784,000 40 tracers & 6 supers	$960,000 50 tracers & 7 supers	$460,000 25 tracers & 3 supers	$568,000 30 tracers & 4 supers
1% with 25 in class (2685 & 4860)	$960,000 50 tracers & 7 supers	$1,136,000 60 tracers & 8 supers	$608,000 30 tracers & 5 supers	$824,000 40 tracers & 7 supers

Overarching assumptions:

Assuming 40+ contact tracers at $17 hour and 6+ clinical supervisors at $50 hour increasing based upon # needed tracings & assuming an ideal contact tracer-to-supervisor ratio 7:1. Assuming each person works 40 hours/week x 20 weeks.
Tracers would be well-trained, able to do some clinical decision making & have tech savvy skills.
Incidence based on students taking only 1 class with class size 15 or 25; incidence will positive increase with size & frequency.

Open source mobile apps with 1 dedicated IT technician for support, daily reports, etc... using Mason WIFI.
*Assuming 25 tracers with 4 supervisors; additional 7 tracers 7 1 supervisor for larger residence size. Need IT costs added.

Campus Capacity Analysis

Mason is able to expand or contract the availability of classroom space using a variety of methods—each having differing levels of impact on the availability of in-person classroom instruction. The two largest influences are the cleaning/transition time between classes and enforced physical distance practices during class.

Lever	Impact on Capacity	Rationale
Available Scheduling Hours	Medium	Increasing available hours outside of 8 am – 10 pm M-F has a positive impact, but each additional hour of availability is haircut by higher cleaning/transition time
Cleaning/Transition Time	High	Under the Fall 2020 assumption of 60 minutes between courses, 47% of available scheduling hours are used in transition vs. 13% in Fall 2019 (15 minutes of transition time)
Seat-Fill Capacity	High	Seating capacity per room varies widely: • 26% at 100 sq ft per student • 41% at 64 sq ft per student • 73% at 36 sq ft per student
In-Person Courses Reduced to Once per Week	Low	In-person courses meet on average only 1.4 times per week and only 26% meet 2+ times per week, so reducing their meetings to 1x per week does not have a major impact on capacity

Under various assumption scenarios, Mason can supply as many as 66.9% or as low as 20.2% of Fall 2019 in-person classroom capacity. The three levers on which this analysis studies are; (1) The percent of in-person classes reduced from two/three times per week to only one in-person meeting with virtual meetings to supplement, (2) the required square feet between students during class, and (3) the number of hours each week in-person classes are offered.

Fall 2020 Maximum Seat Capacity* vs Fall 2019 (Fall 2019 = 100% Seat Capacity)				
	Fall 2020 Sq Ft per Student	Fall 2020 Scheduling Hours		
		86	90	96
33% of 2+ meeting/week courses moving to once per week	36	60.0%	62.8%	66.9%
	64	33.7%	35.3%	37.7%
	100	21.6%	22.6%	24.1%
20% of 2+ meeting/week courses moving to once per week	36	57.7%	60.4%	64.5%
	64	32.5%	34.0%	36.3%
	100	20.8%	21.8%	23.2%
10% of 2+ meeting/week courses moving to once per week	36	56.1%	58.8%	62.7%
	64	31.6%	33.0%	35.3%
	100	20.2%	21.2%	22.6%

Mason can prioritize the expansion of available sections of fully online courses to help reduce the strain on in-person classrooms. In all scenarios, this will involve an expansion of both the number of online sections and the development of sections not currently online. Online courses made up only 12% of Fall 2019 course offerings.

	Fall 2019 Course Offerings		FX	AR	PW	LC
	Total Courses Offered	11,513				
	Total Courses Excluding Irregular Meetings (e.g., Internship, Practicum, Asynchronous)	6,954				
In-Person Courses	Number	6,101	5,240	429	275	30
	Enrollment	140,477	126,838	6,595	4,689	426
	Students / Course	23.0	24.2	15.4	17.1	14.2
	Seat Utilization	54.9%	56.8%	39.9%	48.2%	47.0%
Online Courses	Number	853				
	Enrollment	19,865				
	Students / Course	23.3				

Many of Mason's largest courses already exist online so will need to be expanded while some critical courses will need to be both developed online and scaled to accommodate more students.

Course	Sum of Fall 2019 Enroll	Offered Online?	Online Enrollment	Online Enrollment / Total Enrollment
COMM101	3417	Y	1599	46.8%
ENGH302	2496	Y	22	0.9%
ENGH101	1896	Y	19	1.0%
BIOL103	1784	Y	49	2.7%
HIST125	1563	Y	35	2.2%
IT104	1518	Y	58	3.8%
CS112	1400	N	Not online	Not online
MATH113	1370	N	Not online	Not online
ECON103	1369	Y	96	7.0%
MATH213	1337	N	Not online	Not online
BIOL213	1242	N	Not online	Not online
FNAN303	1059	Y	56	5.3%
MATH114	1010	N	Not online	Not online

Budget Analysis

Baseline vs. Option 1A

Patriot Tiger Team - Fall 2020 Options				
Financial Estimates: Overall Summary				
Estimated Revenue	**Baseline (FY21 May BOV)**		**Option 1a Partial Reopen (1705 Beds)**	**DELTA - Option 1a versus Baseline**
Total E & G Revenues	$	592,382,000	$ 564,214,422	$ (28,167,578)
Total AE Revenues	$	254,522,000	$ 194,221,151	$ (60,300,849)
Total Grants and Contracts Revenues	$	219,400,000	$ 212,818,000	$ (6,582,000)
Total Capital Revenues	$	65,000,000	$ 65,000,000	$ -
Total Other Revenues	$	51,288,000	$ 51,288,000	$ -
Subtotal, Estimated Revenues	**$**	**1,182,592,000**	**$ 1,087,541,573**	**$ (95,050,427)**
TOTAL ESTIMATED REVENUES	**$**	**1,182,592,000**	**$ 1,087,541,573**	**$ (95,050,427)**
Estimated Expenses	**Baseline**		**Option 1a Partial Reopen (1705 Beds)**	**DELTA - Option 1a versus Baseline**
Total E & G Expenses	$	584,081,000	$ 571,057,184	$ (13,023,816)
Total AE Expenses	$	258,422,000	$ 246,557,847	$ (11,864,153)
Total Grants and Contracts Expenses	$	219,400,000	$ 216,468,592	$ (2,931,408)
Total Capital Expenses	$	65,000,000	$ 65,000,000	$ -
Total Other Expenses	$	55,689,000	$ 55,689,000	$ -
Subtotal 1, Estimated Expenses	**$**	**1,182,592,000**	**$ 1,154,772,624**	**$ (27,819,376)**
Subtotal 1, ESTIMATED EXPENSES	**$**	**1,182,592,000**	**$ 1,154,772,624**	**$ (27,819,376)**
NET POSITION BEFORE INVESTMENTS:	**$**	**-**	**$ (67,231,051)**	
On Line Growth Costs	$	-	$ 14,830,109	
Subtotal, On Line Growth Costs	**$**	**-**	**$ 14,830,109**	
Subtotal 2, ESTIMATED EXPENSES	**$**	**1,182,592,000**	**$ 1,169,602,733**	
Student Services Costs	$	-	$ 483,147	
Subtotal, Student Services Costs	**$**	**-**	**$ 483,147**	
Subtotal 3, ESTIMATED EXPENSES	**$**	**1,182,592,000**	**$ 1,170,085,880**	
Health and Safety Costs	$	-	$ 17,390,024	
Subtotal, Health and Safety Costs	**$**	**-**	**$ 17,390,024**	
GRAND TOTAL ESTIMATED EXPENSES	**$**	**1,182,592,000**	**$ 1,187,475,904**	
REVENUES LESS EXPENSES	**$**	**-**	**$ (99,934,331)**	

Baseline vs. Option 1B

Patriot Tiger Team - Fall 2020 Options

Financial Estimates: Overall Summary

Estimated Revenue	Baseline (FY21 May BOV)	Option 1b Partial Reopen (2890 beds)	DELTA - Option 1b versus Baseline
Total E & G Revenues	$ 592,382,000	$ 564,214,422	$ (28,167,578)
Total AE Revenues	$ 254,522,000	$ 212,025,617	$ (42,496,383)
Total Grants and Contracts Revenues	$ 219,400,000	$ 212,818,000	$ (6,582,000)
Total Capital Revenues	$ 65,000,000	$ 65,000,000	$ -
Total Other Revenues	$ 51,288,000	$ 51,288,000	$ -
Subtotal, Estimated Revenues	**$ 1,182,592,000**	**$ 1,105,346,039**	**$ (77,245,961)**
TOTAL ESTIMATED REVENUES	**$ 1,182,592,000**	**$ 1,105,346,039**	**$ (77,245,961)**

Estimated Expenses	Baseline	Option 1b Partial Reopen (2890 beds)	DELTA - Option 1b versus Baseline
Total E & G Expenses	$ 584,081,000	$ 571,057,184	$ (13,023,816)
Total AE Expenses	$ 258,422,000	$ 250,994,196	$ (7,427,804)
Total Grants and Contracts Expenses	$ 219,400,000	$ 216,468,592	$ (2,931,408)
Total Capital Expenses	$ 65,000,000	$ 65,000,000	$ -
Total Other Expenses	$ 55,689,000	$ 55,689,000	$ -
Subtotal 1, Estimated Expenses	**$ 1,182,592,000**	**$ 1,159,208,973**	**$ (23,383,027)**
Subtotal 1, ESTIMATED EXPENSES	**$ 1,182,592,000**	**$ 1,159,208,973**	**$ (23,383,027)**
NET POSITION BEFORE INVESTMENTS:	**$ -**	**$ (53,862,934)**	
On Line Growth Costs	$ -	$ 14,830,109	
Subtotal, On Line Growth Costs	**$ -**	**$ 14,830,109**	
Subtotal 2, ESTIMATED EXPENSES	**$ 1,182,592,000**	**$ 1,174,039,082**	
Student Services Costs	$ -	$ 517,919	
Subtotal, Student Services Costs	**$ -**	**$ 517,919**	
Subtotal 3, ESTIMATED EXPENSES	**$ 1,182,592,000**	**$ 1,174,557,001**	
Health and Safety Costs	$ -	$ 17,390,024	
Subtotal, Health and Safety Costs	**$ -**	**$ 17,390,024**	
GRAND TOTAL ESTIMATED EXPENSES	**$ 1,182,592,000**	**$ 1,191,947,025**	
REVENUES LESS EXPENSES	**$ -**	**$ (86,600,986)**	

Baseline vs. Option 2

Patriot Tiger Team - Fall 2020 Options				
Financial Estimates: Overall Summary				
Estimated Revenue	**Baseline (FY21 May BOV)**		**Option 2 Partial Reopen (3828 beds)**	**DELTA - Option 2a versus Baseline**
Total E & G Revenues	$ 592,382,000		$ 575,439,474	$ (16,942,526)
Total AE Revenues	$ 254,522,000		$ 226,854,424	$ (27,667,576)
Total Grants and Contracts Revenues	$ 219,400,000		$ 212,818,000	$ (6,582,000)
Total Capital Revenues	$ 65,000,000		$ 65,000,000	$ -
Total Other Revenues	$ 51,288,000		$ 51,288,000	$ -
Subtotal, Estimated Revenues	**$ 1,182,592,000**		**$ 1,131,399,898**	**$ (51,192,102)**
TOTAL ESTIMATED REVENUES	**$ 1,182,592,000**		**$ 1,131,399,898**	**$ (51,192,102)**
Estimated Expenses	**Baseline**		**Option 2 Partial Reopen (3828 beds)**	**DELTA - Option 2a versus Baseline**
Total E & G Expenses	$ 584,081,000		$ 571,057,184	$ (13,023,816)
Total AE Expenses	$ 258,422,000		$ 254,429,135	$ (3,992,865)
Total Grants and Contracts Expenses	$ 219,400,000		$ 216,468,592	$ (2,931,408)
Total Capital Expenses	$ 65,000,000		$ 65,000,000	$ -
Total Other Expenses	$ 55,689,000		$ 55,689,000	$ -
Subtotal 1, Estimated Expenses	**$ 1,182,592,000**		**$ 1,162,643,911**	**$ (19,948,089)**
Subtotal 1, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,162,643,911**	**$ (19,948,089)**
NET POSITION BEFORE INVESTMENTS:	**$ -**		**$ (31,244,013)**	
On Line Growth Costs	$ -		$ 19,773,429	
Subtotal, On Line Growth Costs	**$ -**		**$ 19,773,429**	
Subtotal 2, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,182,417,340**	
Student Services Costs	$ -		$ 564,164	
Subtotal, Student Services Costs	**$ -**		**$ 564,164**	
Subtotal 3, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,182,981,504**	
Health and Safety Costs	$ -		$ 17,390,024	
Subtotal, Health and Safety Costs	**$ -**		**$ 17,390,024**	
GRAND TOTAL ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,200,371,528**	
REVENUES LESS EXPENSES	**$ -**		**$ (68,971,630)**	

Baseline vs. Option 3

Patriot Tiger Team - Fall 2020 Options				
Financial Estimates: Overall Summary				
Estimated Revenue	**Baseline (FY21 May BOV)**		**Option 3 Split Curriculum (3828 beds)**	**DELTA - Option 2b versus Baseline**
Total E & G Revenues	$ 592,382,000		$ 577,108,860	$ (15,273,140)
Total AE Revenues	$ 254,522,000		$ 226,505,991	$ (28,016,009)
Total Grants and Contracts Revenues	$ 219,400,000		$ 212,818,000	$ (6,582,000)
Total Capital Revenues	$ 65,000,000		$ 65,000,000	$ -
Total Other Revenues	$ 51,288,000		$ 51,288,000	$ -
Subtotal, Estimated Revenues	**$ 1,182,592,000**		**$ 1,132,720,851**	**$ (49,871,149)**
TOTAL ESTIMATED REVENUES	**$ 1,182,592,000**		**$ 1,132,720,851**	**$ (49,871,149)**
Estimated Expenses	**Baseline**		**Option 3 Split Curriculum (3828 beds**	**DELTA - Option 2b versus Baseline**
Total E & G Expenses	$ 584,081,000		$ 571,057,184	$ (13,023,816)
Total AE Expenses	$ 258,422,000		$ 254,429,135	$ (3,992,865)
Total Grants and Contracts Expenses	$ 219,400,000		$ 216,468,592	$ (2,931,408)
Total Capital Expenses	$ 65,000,000		$ 65,000,000	$ -
Total Other Expenses	$ 55,689,000		$ 55,689,000	$ -
Subtotal 1, Estimated Expenses	**$ 1,182,592,000**		**$ 1,162,643,911**	**$ (19,948,089)**
Subtotal 1, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,162,643,911**	**$ (19,948,089)**
NET POSITION BEFORE INVESTMENTS:	**$ -**		**$ (29,923,060)**	
On Line Growth Costs	$ -		$ 24,721,791	
Subtotal, On Line Growth Costs	**$ -**		**$ 24,721,791**	
Subtotal 2, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,187,365,703**	
Student Services Costs	$ -		$ 564,164	
Subtotal, Student Services Costs	**$ -**		**$ 564,164**	
Subtotal 3, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,187,929,867**	
Health and Safety Costs	$ -		$ 17,390,024	
Subtotal, Health and Safety Costs	**$ -**		**$ 17,390,024**	
GRAND TOTAL ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,205,319,891**	
REVENUES LESS EXPENSES	**$ -**		**$ (72,599,040)**	

Baseline vs. Option 4

Patriot Tiger Team - Fall 2020 Options				
Financial Estimates: Overall Summary				
Estimated Revenue	**Baseline (FY21 May BOV)**		**Option 4 Only Online**	**DELTA - Option 3a versus Baseline**
Total E & G Revenues	$ 592,382,000		$ 502,342,890	$ (90,039,110)
Total AE Revenues	$ 254,522,000		$ 147,922,635	$ (106,599,365)
Total Grants and Contracts Revenues	$ 219,400,000		$ 212,818,000	$ (6,582,000)
Total Capital Revenues	$ 65,000,000		$ 65,000,000	$ -
Total Other Revenues	$ 51,288,000		$ 51,288,000	$ -
Subtotal, Estimated Revenues	**$ 1,182,592,000**		**$ 979,371,525**	**$ (203,220,475)**
TOTAL ESTIMATED REVENUES	**$ 1,182,592,000**		**$ 979,371,525**	**$ (203,220,475)**
Estimated Expenses	**Baseline**		**Option 4 Only Online**	**DELTA - Option 3a versus Baseline**
Total E & G Expenses	$ 584,081,000		$ 571,057,184	$ (13,023,816)
Total AE Expenses	$ 258,422,000		$ 236,891,876	$ (21,530,124)
Total Grants and Contracts Expenses	$ 219,400,000		$ 216,468,592	$ (2,931,408)
Total Capital Expenses	$ 65,000,000		$ 65,000,000	$ -
Total Other Expenses	$ 55,689,000		$ 55,689,000	$ -
Subtotal 1, Estimated Expenses	**$ 1,182,592,000**		**$ 1,145,106,652**	**$ (37,485,348)**
Subtotal 1, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,145,106,652**	**$ (37,485,348)**
NET POSITION BEFORE INVESTMENTS:	**$ -**		**$ (165,735,128)**	
On Line Growth Costs	$ -		$ 24,721,791	
Subtotal, On Line Growth Costs	**$ -**		**$ 24,721,791**	
Subtotal 2, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,169,828,444**	
Student Services Costs	$ -		$ -	
Subtotal, Student Services Costs	**$ -**		**$ -**	
Subtotal 3, ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,169,828,444**	
Health and Safety Costs	$ -		$ 4,347,506	
Subtotal, Health and Safety Costs	**$ -**		**$ 4,347,506**	
GRAND TOTAL ESTIMATED EXPENSES	**$ 1,182,592,000**		**$ 1,174,175,950**	
REVENUES LESS EXPENSES	**$ -**		**$ (194,804,425)**	

Housing Analysis

Below are housing scenario options. **All models assume every student will have their own bedroom and additional health, well-being, and safety precautions are in place.** With a mixture of apartment-style, suite, and traditional student housing options, this assessment takes into consideration the physical layout of the living spaces, the ability for residents to control their environment and sanitization while performing basic living functions, the extent to which residents have control over the practices of others who live with them, and the consideration of physical distancing and use of isolation and quarantine spaces in the event of outbreak. Through education and resources, residents will have some control over and responsibility for their environment, in coordination with housing staff and guidelines established by Housing and Residence Life, Student Health Services, Student Conduct and others.

Option 1/1A = scaled down occupancy: Option 1/1A range = 29%-45%; Option 2 = 60%

Option 1: Every student has own bedroom and bathroom - 1:1 student-to-bathroom ratio; Fairfax and SciTech campuses

Option 1 provides a 1:1 student-to-bathroom ratio in all spaces, including traditional residence halls - This 1:1 ratio would allow the University to house approximately 1,855 residents across 40 buildings (housing 263 students in the traditional halls) with an overall occupancy rate at 29%. This option was developed utilizing studies of congregate living settings such as cruise ships, military barracks and dorms, which indicate that attack rates of respiratory pathogens can be extremely high, and that shared bedrooms, bathrooms and kitchens were shown to increase risk of disease transmission. This 1:1 option provides the lowest relative risk for transmission in residence halls, given that widespread outbreaks of COVID-19 are driven by close physical contact.[1] In this scenario, students would be essentially self-quarantined, which could lower transmission given the varying percentage of asymptomatic carriers who can spread the disease, as well as pre-symptomatic individuals who are contagious for at least 48 hours before becoming symptomatic.[2] Option 1 results in estimated annual housing loss of $29,542,097

[1] https://doi.org/10.1016/j.idm.2020.02.003; *Emerging Infectious Disease Journal. 2005 Apr; 11(4): 579–583. doi: 10.3201/eid1104.040845; Emerging Infectious Disease Journal. 2019 Oct; 25(10): 1802–1809. doi: 10.3201/eid2510.190130*

[2] https://www.sciencealert.com/a-physician-answers-5-questions-about-asymptomatic-covid-19

Option 1A: Every student has own bedroom and shares bathroom – 1-4 students per bathroom

This ratio would allow the University to house roughly 2,899 residents with an overall occupancy rate at 45%. This scenario provides a greater student-to-bathroom ratio in residential spaces, but does not utilize traditional residence halls. This model utilizes housing spaces that would be reserved for quarantine/isolation usage; Increased and consistent/regular cleaning of residence halls as well as scheduled cleaning of internal bathrooms within suites. Examples of student-to-bathroom ratios:

- 2-BR suites where both bedrooms have one occupant (vs. the normal 2 per BR) and a shared bathroom
- 4-BR, 2-bath apartments, which would have a 2:1 ratio
- Possible 3:1 student-to-bathroom in 3-BR, 1-bath apartments, or in "odd" configurations, like a 5-BR, 2-bath unit

Option 1A requires that students who become ill would need to be (moved and) quarantined. After contact tracing, all close contacts of the sick student will require a separate quarantine space in campus housing. In addition, additional risk mitigation strategies would be in place (see below). Option 1A results in estimated annual housing loss of $17,283,067.

Option 2: Every student has own bedroom, 1-8 students per bathroom:

This option would allow the university to house approximately 3,837 students in single bedrooms at an overall occupancy rate of 60%. Option 2 *includes the use of traditional halls* to maximize residential students while maintaining single bedrooms and utilizes space for quarantine/isolation usage; over 300 residents could have their own bathroom; others would share with 1-7 others. By utilizing the traditional residence halls, there could be up to 1,000 students sharing common bathrooms. Additional risk mitigation strategies would be in place (see below).

Option 2 requires that students who become ill would need to be (moved and) quarantined. After contact tracing, all close contacts of the sick student will require a separate quarantine space in campus housing. In addition, additional risk mitigation strategies would be in place (see below). Option 2 results in an estimated annual housing loss of $8,391,807.

Additional Risk mitigation strategies as occupancy increases:

- Students will be required to sign a well-being contract;
- Housing and Residence Life will require housing applicants to complete SHS medical history (available on the secure EMR portal), which will facilitate contact investigation in students with immunocompromised or other high risk conditions.

- Students with high risk medical conditions will be encouraged to consult with their primary care provider, or SHS if they consider Student Health to be their primary provider, to determine if they should apply for housing accommodations.
- Residential students will be required to complete regular surveys about possible exposure to COVID or high risk travel, which will be evaluated by SHS personnel to determine need for isolation or quarantine.
- Common kitchens and common meeting rooms will be closed (thus requiring meal plans for each student living on-campus);
- Furniture to be spaced 10 feet apart in common areas;
- Common spaces in apartments (bathroom, common living rooms, etc.) to be professionally cleaned regularly;
- Students required to wear masks outside of their bedroom/bathroom when in common internal areas;
- Students maintain prescribed social distance protocols;
- Additional student conduct protocols will be developed and implemented

Overall impact on Student Health Services/local healthcare systems:

When considering increasing the number of students living in residential halls, it is important to consider the impact on healthcare services and the local healthcare system. Although young adults appear to be at less risk for severe disease, even individuals with mild or no symptoms can act as transmitters of disease (1,2), an effect significantly multiplied with individuals living in close proximity. It is well documented that in similar congregate setting populations, such as military bases, and boarding schools, outbreaks happen more rapidly and more individuals become sick (3,4). Sick students on-campus seek medical attention through Student Health Services, and along with increased clinical services need, comes depletion of PPE supply, increased potential for health service staff illness and quarantine, and diversion of staff resources away from clinical services to contact tracing. For example, based on data from previous cold/flu seasons, if SHS staff utilizes full PPE for every encounter with a patient with cold/flu/gastrointestinal symptoms in order to protect our staff from possible COVID-19, we would deplete our existing supply of key items, such as gowns, by the beginning of October 2020. In the limited contact tracing performed by SHS staff this spring, when all classes were online and only about 350 students remained in residential halls, there were up to 11 Mason student close contacts who needed to be quarantined from a single case. This number will only increase as more students have face-to-face interactions. Students who have potential complications of COVID, such as pneumonia or respiratory failure, will be referred to our local healthcare system, adding an additional strain on hospital beds, ventilator use, and ICU beds and staffing.

Medical professionals enter into the profession with an understanding that patients will get sick, and some may die, and that sometimes we put ourselves at risk in trying to help them. The financial and administrative impact of COVID on health services and strain on local healthcare systems is one thing; the personal cost of losing a patient, or having a patient or colleague get

sick when there were actions that could have reduced this risk is unquantifiable, and much harder to recover from.

References

1. Furukawa NW, Brooks JT, Sobel J. Evidence supporting transmission of severe acute respiratory syndrome coronavirus 2 while presymptomatic or asymptomatic. Emerg Infect Dis. 2020 Jul https://doi.org/10.3201/eid2607.201595

2. Helmy, YA et al. The COVID-19 Pandemic: A Comprehensive Review of Taxonomy, Genetics, Epidemiology, Diagnosis, Treatment, and Control. J. Clin. Med. 2020, 9(4), 1225; https://doi.org/10.3390/jcm9041225

3. Balicer RD, Huerta M, Levy Y, et al. Influenza Outbreak Control in Confined Settings. Emerging Infectious Diseases. 2005;11(4):579-583. doi:10.3201/eid1104.040845.

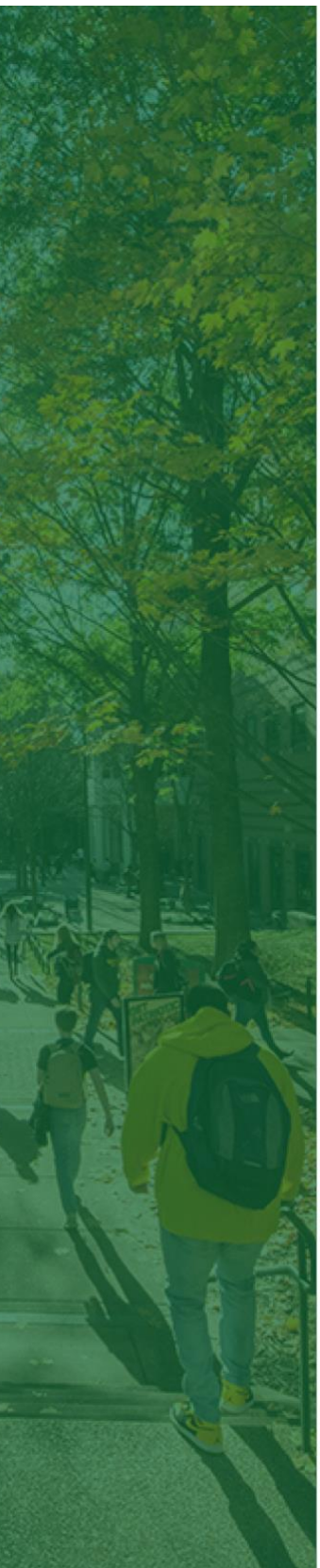
4. Van Kerkhove MD, Alaswad S, Assiri A, et al. Transmissibility of MERS-CoV Infection in Closed Setting, Riyadh, Saudi Arabia, 2015. Emerging Infectious Diseases. 2019;25(10):1802-1809. doi:10.3201/eid2510.190130

HOUSING & RESIDENCE LIFE
COVID-19 FY21 FALL + SPRING SCENARIOS
As of 5.07.20 4:00PM

Assumptions:
1. All beds are at single rate (see box below)
2. All beds at the Cabrera Global Center (CGC) are utilized by Housing & are included below (not INTO beds)
3. Beds represented below include all beds (including student staff & emergency room beds)
4. Options 1-1A-2: All students are in their own bedroom
5. Option 1A: one student per bedroom and up to 4 students per bath
6. Option 2: 1:x where x = up to 3, one student per bedroom and up to 3 students per bath
7. Current Housing Reserve = 16.7 million

	Base for FY21	Option 1 1:1 bed-bath (max version)	Option 1A UP TO 4 students per bathroom; each student has own BR (CGC held for quarantine, traditional out)	Option 2 UP TO 3 students per bath, each student has own BR (CGC held for quarantine)	Original Budget
Fairfax Residents:					
revenue-generating beds	6,049				5,767
student staff/emer beds	205				196
total beds	6,254				5,963
Fall residents (max)		1,705	2,890	3,828	
Fall beds (removed for quarantine)			(141)	(141)	
Net Fall residents		1,705	2,749	3,687	
Residents with 1:1 bed/bath		*1,705*	*238*	*304*	
Less: 4% loss of Spring residents		(68)	(110)	(147)	
Net Spring residents		1,637	2,639	3,540	
Beacon Hall residents:					
revenue-generating beds	146	150	150	150	133
student staff/emer beds	4				4
Fall residents (max)	150	150	150	150	137
TOTAL NET FALL RESIDENTS (FFX + BEACON)		**1,855**	**2,899**	3,837	
Less: 4% loss of Spring residents		(6)	(6)	(6)	
Net Spring residents - Beacon Hall		144	144	144	
FAIRFAX (including CGC):					
ORIGINAL FY21 BUDGET					**$47,935,297**
FALL with 4% LESS SPRING		$18,393,200	$30,652,230	$39,543,490	
Diff from Orig Budget		*($29,542,097)*	*($17,283,067)*	*($8,391,807)*	
BEACON HALL (SciTech):					
ORIGINAL FY21 BUDGET					**$1,386,410**
FALL with 4% LESS SPRING		$1,585,500	$1,585,500	$1,585,500	
Diff from Orig Budget		*$199,090*	*$199,090*	*$199,090*	

Community Perspectives Summary



The Patriot Tiger Team developed a robust process to outline Fall 2020 semester options, and engaged subject-matter experts within the workgroup, special COVID-focused working groups, academic and operational leadership, and students to identify important issues. This summary outlines the major themes that were shared with Tiger Team members in-person, via email, within focus groups, and in Tiger Team meetings.

All Options

- What health and safety strategies will be instituted to protect the Mason community?
- How does the fall decision impact Mason's ability to fulfill its mission?
- What support structures, resources and processes are in place to shift coursework to new modalities?
- How do we protect and support our most vulnerable populations?
- How do the models flex to address a second wave of COVID-19?
- How do all options affect special student populations and instructional faculty who do less well with online learning?
- In what ways does this model impact health and safety, campus operations, and research capacity?

Return to Campus – Scaled Down and Scaled Up

- What additional health and safety, operational, and support factors require special consideration when students return to dorms?
- How are special populations prioritized in this model?
- How does this option impact the ability to restart research on campus?

Split Curriculum

- How does offering both online and in-person options impact the number and scope of course options available?
- How does Mason's instructional, staffing, and support structure change to support more course sections and student enrollment variability in a bimodal approach?

Online Only

- How does this option affect special student populations and instructional faculty who do less well with online learning?
- How does tuition strategy affect this model?

Student Contact Network – Fall 2019 Mason Analysis

Compiled by: Dr. Dieter Pfoser, Department of Geography and Geoinformation, Mason Datalab

This summary outlines the major themes that were shared with Tiger Team members in-person, via email, within focus groups, and in Tiger Team meetings. This study details the results of questions related to class size and the distinctions among Mason's schools and colleges. This information helped in the consideration of the selected options.

In analyzing overall impacts of the pandemic, sociologists at Cornell University reported on data about student networks and course-taking patterns in order to map the risks of bringing students back together in classrooms. To understand the relevant risks for Mason specifically, this study was replicated to determine the following:

1. What are the characteristics of the GMU student contact network; and
2. How is it affected by course enrollment?

Dr. Dieter Pfoser, Department of Geography and Geoinformation, and a member of the Mason Datalab, reviewed the Fairfax campus, fall 2019 semester, to understand interaction patterns. The analysis included 32,151 students enrolled in 6779 courses. The results of this analysis support the advantage of minimizing class sizes for fall 2020.

Overview

Questions and Data

- **Questions**
  - What are the characteristics of the GMU student contact network and how is it affected by course enrollment?
  - How would such a network affect disease spread?
- **Data**
  - Fairfax Campus, Fall 2019 Semester
  - 32151 Students enrolled in 6779 Courses
- **Not considered!**
  - Employees
  - Dorm, dining, commuting, etc. contacts

Students meeting students

How many others does a student meet in class every week?

- **“Degree” or contacts of a student node**
- **GMU avg. 171**
- **College averages vary**
  - Highest COS
  - Lowest CEHD

BUS	207.4
CEHD	56.3
CHHS	133.5
CHSS	135.4
COS	217.1
CVPA	158.1
S-CAR	138.3
SSPG	196.9
UN	182.7
VSE	214.3

Reducing class size

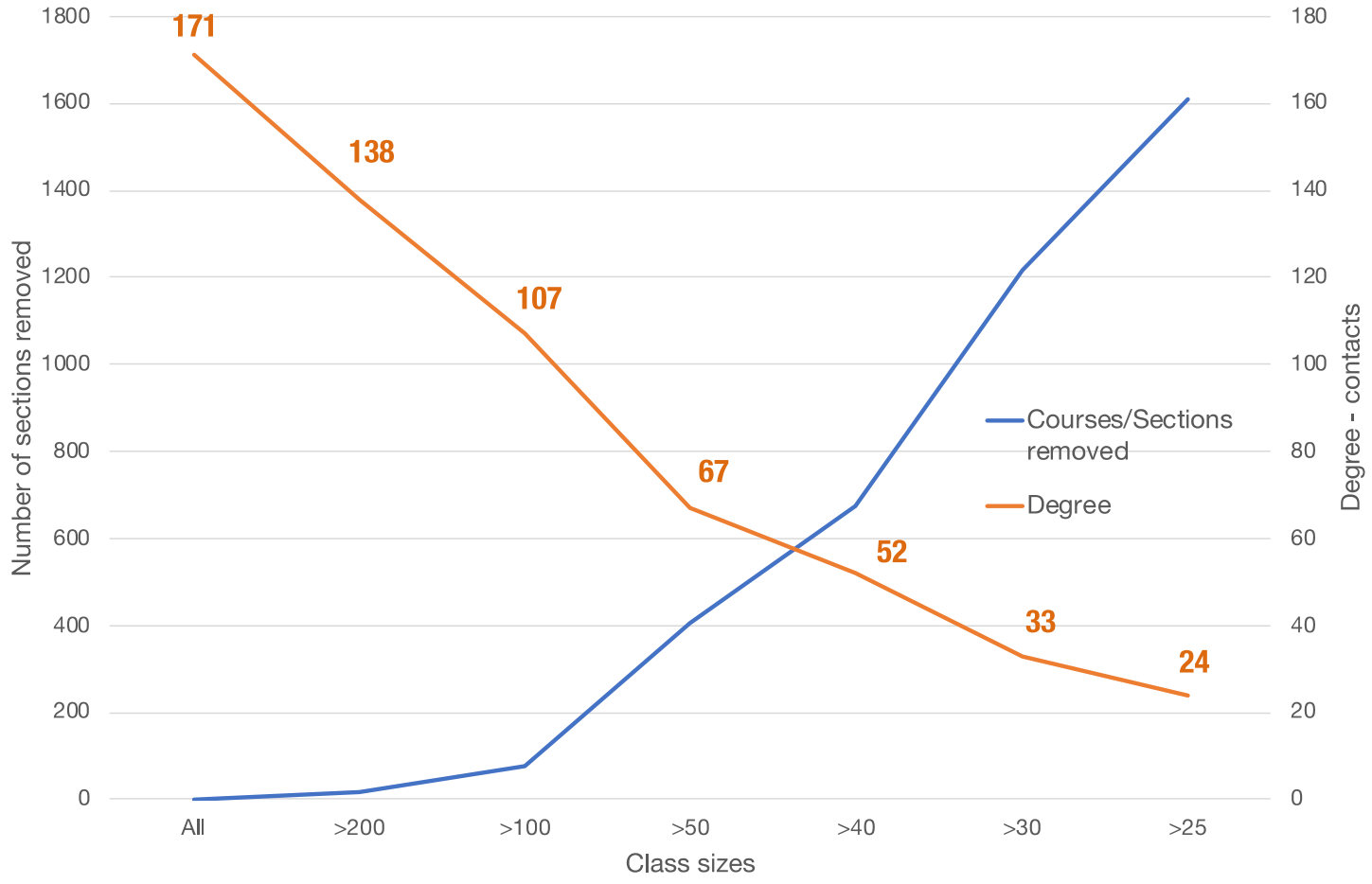
How many courses (sections) are affected by potential reduction in class size (moving online)? How does it affect the degree/contacts of students?

- **6779 courses**
- **F2F only**
- **Fairfax Campus**

Class size	Courses	Degree
All	0	171
>200	18	138
>100	77	107
>50	406	67
>40	676	52
>30	1216	33
>25	1610	24

Reducing class size

Potential reduction in class size (moving online)? How does it affect the degree/contacts of students?



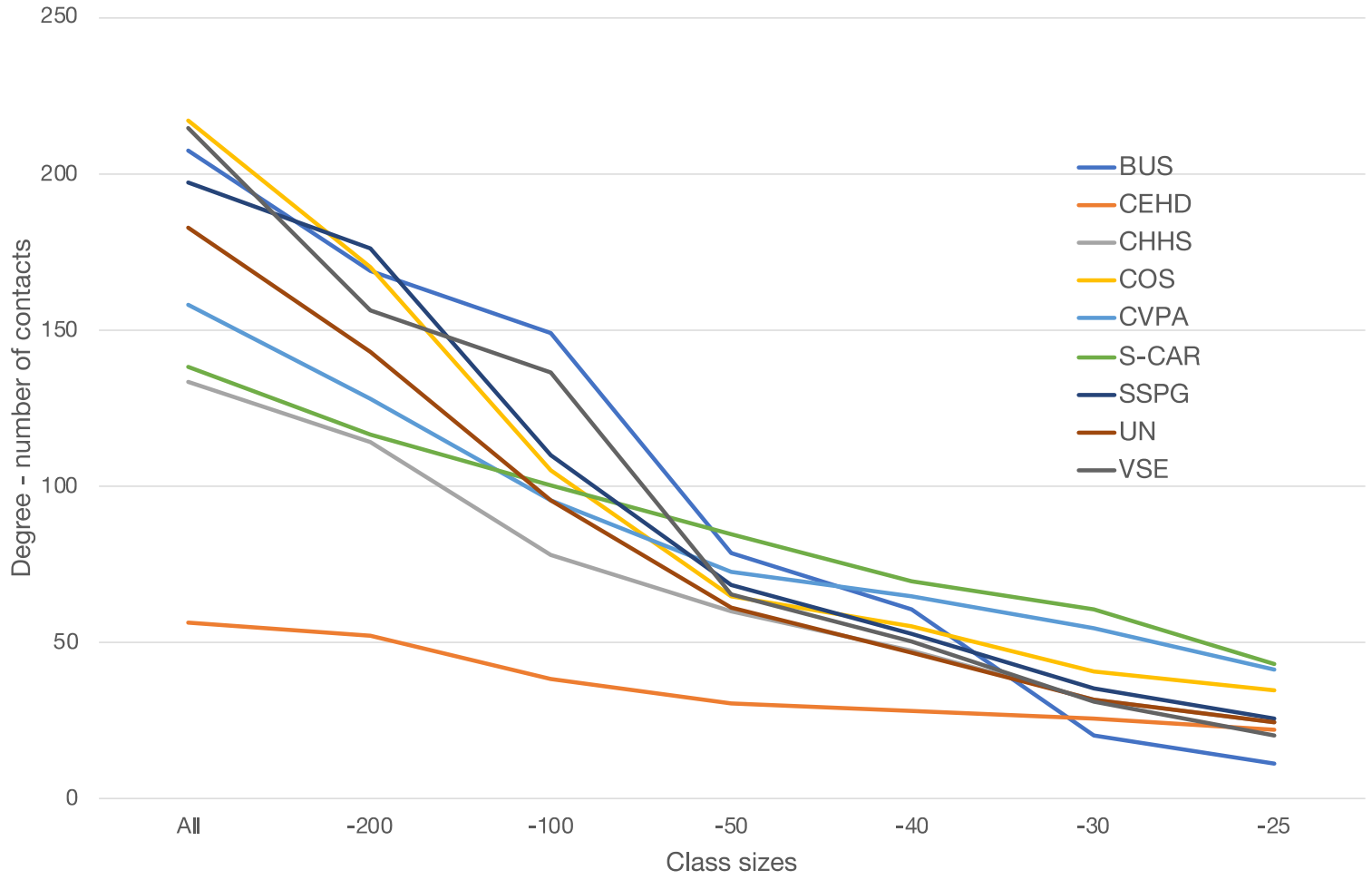
Degree/Contacts per College

Reduction in class size. How many other students does a student meet through class every week?

	All	-200	%	-100	%	-50		-40		-30		-25	
BUS	207	169	19	149	28	78	62	60	71	20	90	11	95
CEHD	56	52	8	38	32	31	46	28	50	26	54	22	60
CHHS	134	114	15	78	42	60	55	47	65	32	76	25	81
CHSS	135	120	11	93	31	75	45	52	61	33	75	26	81
COS	217	170	22	105	51	65	70	55	75	41	81	34	84
CVPA	158	128	19	95	40	73	54	65	59	55	65	42	74
S-CAR	138	117	16	100	28	85	39	70	50	61	56	43	69
SSPG	197	176	10	110	44	69	65	53	73	35	82	26	87
UN	183	143	22	96	48	61	67	47	74	32	83	25	86
VSE	214	156	27	136	36	65	70	51	76	31	85	21	90

Degree/Contacts per College

Trends



Degree/Contacts based on year

How many other students does one meet based on degree (year)

- Number of students met decreases with seniority

Freshman	346.4
Sophomore	298.9
Junior	202.5
Senior	142.7
Non-deg Undergrad	110.4
Graduate Certificate	31.4
Master's	33.3
Doctoral	14.9
Non-deg Grad	29.7
Other	47.0

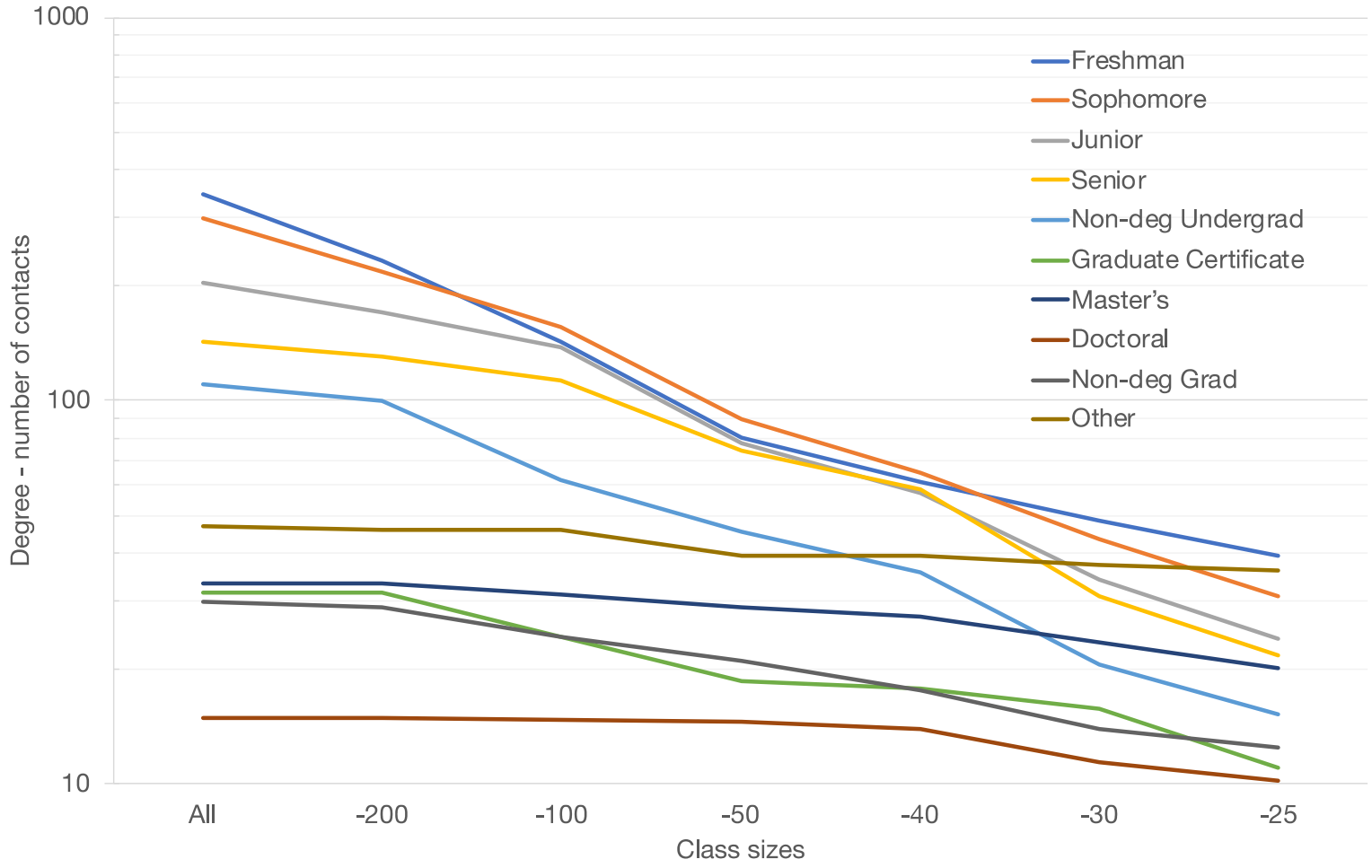
Degree/Contacts based on year

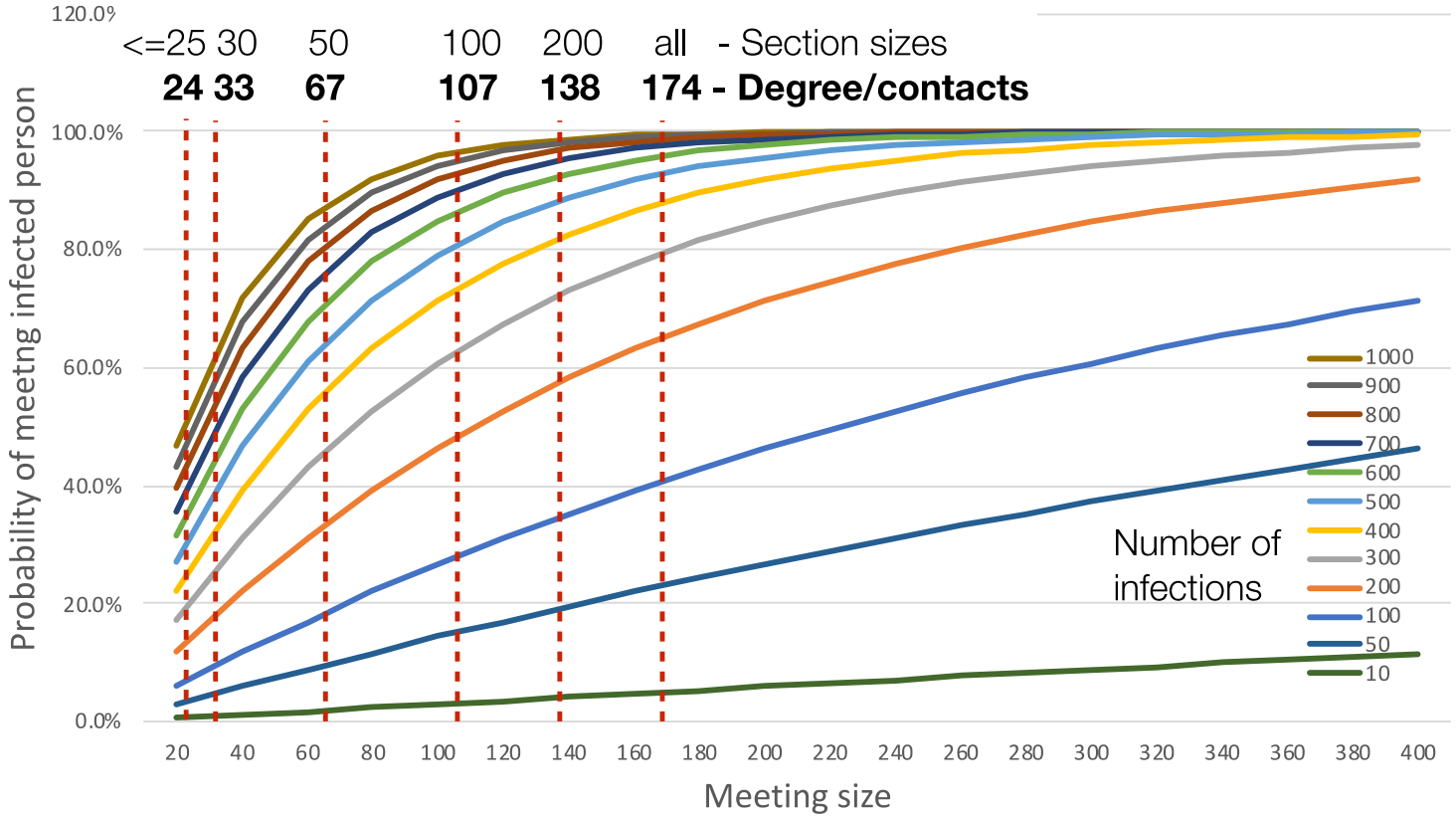
Class sizes: all (as is), <200, <100, <50, <40, <30, <25

	All	<200	%	<100	%	-50	%	-40	%	-30	%	-25	%
Freshman	346	232	33	142	59	80	77	62	82	49	86	39	89
Sophomore	299	217	28	155	48	89	70	65	78	44	85	31	90
Junior	203	170	16	138	32	78	62	57	72	34	83	24	88
Senior	143	130	9	113	21	74	48	58	59	31	78	22	85
Non-deg	110	100	10	62	44	46	59	36	68	21	81	15	86
Graduate	31	31	0	24	23	19	41	18	43	16	50	11	65
Master's	33	33	0	31	6	29	13	27	18	23	30	20	40
Doctoral	15	15	0	15	1	15	3	14	7	11	23	10	32
Non-deg	30	29	3	24	19	21	29	18	41	14	53	12	58
Other	47	46	2	46	2	40	16	39	16	37	21	36	23

Degree/Contacts based on year

Class sizes: all (as is), <200, <100, <50, <40, <30, <25



Probability Meeting Infected Person

GMU - 32151 Students