Westfield STATE UNIVERSITY

Board of Trustees
Academic and Student Affairs Committee

9:30 AM
June 29, 2021
Owl's Nest (Room 018), Ely Campus Center

A live stream of the meeting for public viewing will also take place on YouTube at the following link: https://www.westfield.ma.edu/live

---

1. **Call to Order**   Trustee Martin

2. **Approval of Minutes**   Trustee Martin
   April 29, 2021

3. **Academic Affairs**

   a. NECHE 2022-2023 Reaccreditation   Dr. Juline Mills
      i. Overview/Review of Updated Standards   Mr. Tom Raffensperger, MLIS
      ii. WSU / NECHE Process Review   Dr. Kimberly Tobin
      iii. Trustees NECHE Participation   Ms. Callie Katsounakis, MA

   b. Mission Statement Review   Dr. Juline Mills
      i. Advisory Committee Proposal
      ii. Motion: Mission Statement Review-Item for Action

   c. B.S. in Data Science   Dr. Juline Mills
      i. Overview- B.S. in Data Science   Dr. Jennifer Hanselman
      ii. Motion: B.S. in Data Science-Item for Action   Dr. Goopeel Chung
                                                                        Dr. Brian Jennings

4. **Student Affairs - Item for Discussion**
   a. The Student Experience: A Key to Retention   Dr. Gloria Lopez
                                                                        Mr. Matthew Dellea
                                                                        Ms. Shannon Green

Attachment(s)

    A. Minutes, April 29, 2021
    B. NECHE PowerPoint
    C. NECHE Committee Charge
    D. NECHE Committee Timeline
    E. NECHE Request-Subcommittee Membership
    F. Mission Statement PowerPoint
    G. Academic Affairs Request-Mission Statement Review
    H. MOTION: Mission Statement Committee and Review
    I. B.S. in Data Science PowerPoint
    J. Program Process Review-B.S. in Data Science
    K. Letter of Intent-B.S. in Data Science
    L. MOTION: Approval of B.S. in Data Science
    M. Student Engagement PowerPoint

BOARD OF TRUSTEES

Academic and Student Affairs Committee
April 29, 2021
Minutes

Meeting held virtually via Zoom

In accordance with Massachusetts Gov. Charlie Baker's Executive Order Suspending Certain Provisions of the Open Meeting Law, G.L. c. 30A, § 20 dated March 12, 2020.

A live stream of the meeting for public viewing also took place on YouTube.

MEMBERS PARTICIPATING REMOTELY: Committee Chair Martin, Vice Chair Williams, Secretary Neves, Martinez-Alvarez, and Sullivan

MEMBERS EXCUSED: Trustee Landrau

TRUSTEE GUESTS PARTICIPATING REMOTELY: Trustees Boudreau, Magovern, Queenin, and Salehi

Dr. Roy H. Saigo, Interim President of Westfield State University, was also participating remotely.

The meeting was called to order at 9:44 AM by Committee Chair Martin and a roll call was taken of the committee members participating as listed above. It was announced that the meeting is being livestreamed and captured as recorded.

> **MOTION** made by Trustee Martinez-Alvarez, seconded by Trustee Sullivan, to approve the minutes of the December 17, 2020 meeting.
>
> There being no discussion, **ROLL CALL VOTE** taken:
>
> | | | | |
> |---|---|---|---|
> | Trustee Martin | Yes | Trustee Sullivan | Yes |
> | Trustee Martinez-Alvarez | Yes | Trustee Williams | Yes |
> | Trustee Neves | Yes | **Motion passed unanimously.** | |

Dr. Robert Kersting, Provost and Vice President for Academic Affairs, gave an overview of the tenure and promotion process, focusing on the reason and criteria for both. Tenure obligates the institution to employ the recipient for the balance of his or her professional life and is the principal means through which academic freedom is preserved. Promotion is considered a reward for meritorious achievement by the faculty, and each level of promotion indicates a higher order of quality. Detailed information about the candidates will be provided at the full board meeting.

> **MOTION** made by Trustee Martin, seconded by Trustee Williams, to approve the granting of promotion to the rank of Associate Professor, effective September 1, 2021, to:

Dr. Paul Cacolice	Movement Science, Sport, and Leisure Studies
Dr. Heather Caldwell	Ethnic and Gender Studies
Dr. Amanda Salacinski	Movement Science, Sport, and Leisure Studies
Dr. Jamie Rivera	Nursing

To approve the granting of promotion to the rank of Professor, effective September 1, 2021, to:

Dr. Heidi Bohler	Movement Science, Sport, and Leisure Studies
Dr. Byung Jun Cho	Criminal Justice
Dr. Susanne Chuku	Economics and Management
Ms. Heather Crocker-Aulenback	English
Dr. Terri Griffin	Education
Dr. Lynn Pantuosco-Hensch	Movement Science, Sport, and Leisure Studies
Dr. Mark Horwitz	Social Work
Mr. James McNamara	English
Dr. Alice Perry	Criminal Justice
Dr. Daniel Price	Criminal Justice
Dr. Jennifer Propp	Social Work
Dr. Tamara Smith	Sociology
Dr. Karsten Theis	Chemical and Physical Sciences
Dr. Summer Williams	Psychology

Discussion: Dr. Kersting stated that faculty receive formal and informal training on the process. Each year, faculty members are evaluated by a similar process on scholarship, teaching, advising, and service to prepare them for their annual review and evaluation. By the time they get to this point, they have gone through the evaluation process for five years. Beyond this, meetings are provided annually for faculty to meet with the president of the union and the provost to ask questions about the tenure and promotion process. The Faculty Center has also provided opportunities to help support this process.

There being no further discussion, **ROLL CALL VOTE** taken:

Trustee Martin	Yes	Trustee Sullivan	Left meeting
Trustee Martinez-Alvarez	Yes	Trustee Williams	Yes
Trustee Neves	Yes	**Motion passed unanimously.**	

MOTION made by Trustee Martin , seconded by Trustee Martinez-Alvarez, to approve the granting of tenure with automatic promotion, effective September 1, 2021, to:

Dr. Adeyinka Banwo	History
Dr. Jessica Holden	Nursing
Dr. Samuel Ndegeah	Geography, Planning, and Sustainability
Dr. Susan Scott	Nursing

To approve the granting of tenure, effective September 1, 2021, to:

| Dr. Miriam Tager | Education |

There being no discussion, **ROLL CALL VOTE** taken:

Trustee Martin	Yes	Trustee Sullivan	Left meeting
Trustee Martinez-Alvarez	Yes	Trustee Williams	Yes
Trustee Neves	Yes	**Motion passed unanimously.**	

Presentation on Center for Student Success and Engagement. Dr. Kersting stated that student success has always been a primary goal for Westfield State University and support for that success has also been happening outside of the classroom. The coordination of academic and support programs began one year ago as part of the Parenzo Hall renovation to put all support services under one roof. A new unit in Academic Affairs was created as the Center for Student Success and Engagement, led by Dr. Azanda Seymour, Executive Director. (Trustee Sullivan returned at 10:01 AM). Dr. Seymour presented information on the Center and the leaders of the following programs that fall under its umbrella gave an update: Urban Education Program, Office of Academic Advising and Transfer Transition, Office of Retention and Engagement, Honors Program, TRIO Student Support Services, Banacos Academic Center, Reading and Writing Center, Center for Undergraduate Research and Creative Activity (CURCA), and Veteran and Military Services.

Student Affairs Leadership Panel. Dr. Gloria Lopez, Vice President for Student Affairs, stated one of their goals is to meet students where they are and provide them opportunities to help them soar. Many students have made an impact on the campus community as they have built their skills outside the classroom. Student Affairs brought together the following student leaders who have excelled in their involvement as commuters, MASCAC, Honors Program, class council, student ambassadors, and more. Students Aaron Lessing, Moira McDonald, Mia McDonald, Shane Clark, Lyric Lamagdelaine, Chloe Sanfacon, Kaitlyn Egan, and Cameron Kelleher shared with the committee their experiences and lessons learned at Westfield State through answering guided questions from Student Affairs staff.

There being no further business, **MOTION** made by Trustee Martin, seconded by Trustee Sullivan, to adjourn.

There being no discussion, **ROLL CALL VOTE** taken:

Trustee Martin	Yes	Trustee Sullivan	Yes
Trustee Martinez-Alvarez	Yes	Trustee Williams	Yes
Trustee Neves	Yes	**Motion passed unanimously.**	

Meeting adjourned at 11:06 AM.

Attachments presented at this meeting:
   a) Minutes, December 17, 2020
   b) Tenure and Promotion Criteria
   c) Motion: Promotion
   d) Promotion - Recommendations and Justifications
   e) Motion: Tenure
   f) Tenure - Recommendations and Justifications
   g) Presentation - Center for Student Success and Engagement

Secretary's Certificate

I hereby certify that the foregoing is a true and correct copy of the approved minutes of the Westfield State University Board of Trustees Academic and Student Affairs Committee meeting held on April 29, 2021.

_____   _____
Thalita Neves, Secretary   Date

NECHE Re-accreditation

Review, status update, and what you can do

What is Accreditation?

- Accreditation is a status that provides assurance that an institution meets clearly stated **Standards for Accreditation** and that there are reasonable grounds to believe the institution will continue to meet those standards in the future.

- Every ten years (with a five-year interim report) Westfield State University undergoes re-accreditation with the New England Commission of Higher Education (NECHE). NECHE is the successor to the NEASC CIHE

Why is it Important?
What are the Consequences?

- Reflecting on where we are to plan for continual improvement
- Bring all the good we do to the surface
- Federal, State, and grant funding eligibility
- A negative outcome could damage the university's reputation in a competitive environment
- A negative outcome could require review in six months, a year, two years, depending on the problem. This would consume a significant amount of institutional resources

Standards

- Standard 1: Mission and Purposes
- Standard 2: Planning and Evaluation
- Standard 3: Organization and Governance
- Standard 4: The Academic Program
- Standard 5: Students
- Standard 6: Teaching, Learning, and Scholarship
- Standard 7: Institutional Resources
- Standard 8: Educational Effectiveness
- Standard 9: Integrity, Transparency, and Public Disclosure

Full Standards at: https://lib.westfield.ma.edu/NECHE23

Significant Changes from 2012

Standard 1: Mission and Purposes	No Substantive Change
Standard 2: Planning and Evaluation	Adds: The institution demonstrates its success in strategic, academic, financial, and other resource planning and the evaluation of its educational effectiveness.
Standard 3: Organization and Governance	No Substantive Change
Standard 4: The Academic Program	No Substantive Change
Standard 5: Students	Prior Standard 6. Adds: The institution addresses its own goals for the achievement of diversity, equity, and inclusion among its students and provides a safe environment that fosters the intellectual and personal development of its students. Equity is emphasized in standard.
Standard 6: Teaching, Learning, and Scholarship	Prior Standard 5, with more specificity. The institution supports teaching and learning through a well-qualified faculty and academic staff, who, in structures and processes appropriate to the institution, collectively ensure the quality of instruction and support for student learning. Scholarship, research, and creative activities receive support appropriate to the institution's mission. The institution's faculty has primary responsibility for advancing the institution's academic purposes through teaching, learning, and scholarship.

Significant Changes from 2012

Standard 7: Institutional Resources	Combines 2012 Standards 7-9 (Standard 7: Library and Other Information Resources; Standard 8: Technological Resources; Standard 9: Financial Resources)
Standard 8: Educational Effectiveness	NEW FOCUS AREA: The institution demonstrates its effectiveness by ensuring satisfactory levels of student achievement on mission-appropriate student outcomes. Based on verifiable information, the institution understands what its students have gained as a result of their education and has useful evidence about the success of its recent graduates. This information is used for planning and improvement, resource allocation, and to inform the public about the institution. Student achievement is at a level appropriate for the degree awarded
Standard 9: Integrity, Transparency, and Public Disclosure	Combines 2012 Standards 10 and 11 (Standard 10: Public Disclosure; Standard 11: Integrity). Adds Transparency

What's the Process?

For Westfield State:
1. The Self Study Committee: NECHE23
2. Self-study Report
3. The Visit

For NECHE:
1. Review the Self-Study
2. Visit
3. Visiting Team Report and Commission Action Letter

Structure

- NECHE23 Committee: Steering committee and 12 subcommittees
- The Steering Committee includes the two Co-Chairs (Kim Tobin and Tom Raffensperger), the Accreditation Coordinator (Callie Katsounakis), and the chairs of the subcommittees
- Representation from each of the bargaining units, students, NUPs, and Trustees
- Each subcommittee will choose its own chair, except Standard 7, Institutional Resources, which will be chaired by the Vice President of Administration & Finance

NECHE23 Website

Timeline

- Summer 2021: Organization, data gathering, work plans
- Fall 2021: training, communications, town hall meetings, and writing
- **December 1, 2021: First drafts complete**
- March 1, 2022: Completion of review of first drafts
- April 1, 2022: Committees submit second drafts
- **May 15, 2022 Committee final reports completed**
- August 25, 2022: Full self-study draft is completed
- By November 1, 2022: Town hall presenting final self-study is presented
- **December 1, 2022: Self-study submitted to NECHE**
- **April, 2023: NECHE Visiting team on campus**

Parallel Processes

- NECHE23 Committee identifies issues and completes the self study, objectively describing our status in regard to the standards, and educates the university community on where we are. We all need to be on the same page!

- Trustees, Cabinet, the respective divisions, and University Committees work to resolve issues and address problem points

Areas of Emphasis 2012 NEASC Report

- Assuring its governance structure effectively facilitates the integration of strategic and academic planning;

- Providing sufficient resources to support institutional planning and evaluation activities;

- **Continuing to develop and implement a comprehensive and systematic approach to the assessment of student learning and program review**;

- Developing and implementing a coherent and substantive common core curriculum.

Areas of Emphasis: 2017 Interim NEASC Report

- Implementing its strategic plan;
- Assessing its common core program;
- Narrowing the student success "achievement gap;"
- Developing and implementing plans to address deferred maintenance

Where we are now

- Committee charge has been approved
- The makeup of the subcommittees has been determined
- Collective bargaining units are being engaged to populate subcommittees
- NECHE23 website and SharePoint are set up
- NECHE23 email address has been established
- A timeline has been established
- Funding for operations over the summer has been identified
- Creating Standards spreadsheets for each subcommittee with SWOT analysis and action lists

What you can do:

Assign Board of Trustees members to serve as liaisons for three NECHE Accreditation Standards. Deadline: July 6

- Standard 3 (Board of Trustees Governance Committee)
- Standard 7 (one trustee)
- Standard 9 (one trustee)

Westfield STATE UNIVERSITY

Advisory Committee for Westfield State University New England Commission of Higher Education (NECHE) Re-accreditation 2023

Charge: The Advisory Committee for NECHE Re-accreditation 2023 (NECHE23) will be responsible for completing and submitting the comprehensive self-study report and all addenda in preparation for the site visit of the NECHE Visiting Team in Spring 2023, as well as ensuring a productive visit by the NECHE Visiting Team.

In order to accomplish this, NECHE23 will:
- Develop a clear reporting and participatory structure that involves the entire campus community
- Create subcommittees to complete the assigned sections of the self-study
- Identify chairs or co-chairs for each subcommittee
- Establish a timeline for completion and revision of work
- Endeavor to complete the report in an objective manner
- Collect and organize data
- Inform administrative units of areas of concern
- Review and edit draft documents for accuracy and readability
- Assemble the report and all required addenda
- Liaise with NECHE officials to ensure correct and successful completion of the report and a productive visit by representatives of the Commission
- Proactively collect widespread input from the campus community
- Keep the campus community informed of progress through distribution of draft report sections, town hall meetings, the committee website, and regular updates
- Maintain transparency and openness in all work, respecting confidentiality where appropriate and necessary in accordance with laws and regulations
- Ensure that all constituencies have a voice in the approval of the final draft of the self-study.

NECHE 23 is established as an Advisory Committee under the provisions of the MSCA/BHE Collective Bargaining Agreement.

Committee Structure:

The Committee will be composed of a Steering Committee and subcommittees

Steering Committee	Co-chairs Director of Accreditation Chairs of the subcommittees
Subcommittee 1, Standard 1: Mission and Purposes	2 Faculty members 1 NUP - Senior Administrator 1 Board member 1 Student 1 APA 1 AFSCME
Subcommittee 2, Standard 2: Planning and Evaluation.	2 Faculty members 1 NUP 1 APA 1 Administrator – President's Office 1 IMT member
Subcommittee 3, Standard 3: Organization and Governance	2 Faculty members 1 Vice President 1 APA 1 AFSCME 1 student **Trustee Subcommittee** 3 Trustees 1 Student Trustee
Subcommittee 4, Standard 4: The Academic Program.	10 Faculty members 1 Registrar 3 APA 2 SCORE Co-chairs 1 Academic Affairs Administrator 1 AFSCME 2 Students
Subcommittee 5, Standard 5: Students	3 APA 1 NUP, Center for Student Success and Engagement 1 Athletics administrator 1 Admissions administrator 1 VP Enrollment management 1 Student Services administrator 2 faculty 2 students 1 Librarian 1 AFSCME from Student Affairs

Subcommittee 6, Standard 6: Teaching, Learning, and Scholarship	4 Faculty 4 APA 1 Part-time faculty 1 Academic Affairs Administrator 1 student 1 Librarian
Subcommittee 7, Standard 7: Institutional Resources Also for Appendix: • Most recent year's audited financial statements • Auditor's management letter containing specific recommendations to the institution on its financial controls and practices. • Also for front matter: Organizational charts	2 Faculty members 1 VP of Finance and Administration (Chair) 1 APA (from A&F) 1 NUP (from A&F) 1 Trustee Liaison (ex-officio) 1 NUP (from OHRIDE) 1 AFSCME 1 NUP (ITS) 1 Librarian 1 NUP (Institutional Advancement) 1 APA (Institutional Advancement) 1 Student
Subcommittee 8, Standard 8: Educational Effectiveness; includes E-Series Forms (Student Achievement and Success: Making Assessment More Explicit)	4 Faculty members 1 NUP (Institutional Research and Assessment) 1 APA 1 Academic Affairs Administrator
Subcommittee 9, Standard 9: Integrity, Transparency, and Public Disclosure	1 Trustee Liaison (ex-officio) 2 Faculty members 1 NUP 1 Librarian 1 APA administrator 1 student 1 APA (from OHRIDE)
Subcommittee 10: Overview and report frontmatter and appendices	Co-chairs Director of Accreditation 1 Administrator – President's Office 1 NUP
Subcommittee 11: Data	Office of Institutional Research and Assessment
Subcommittee 12: NECHE Team Visit coordination and support	Co-chairs Director of Accreditation 1 APA from ITS

NECHE '23 TIMELINE

Date	Tasks
May – June 15, 2021	Establish Steering Committee; Create subcommittee structure; Draft charge template
End of Summer 2021	Determine site visit date and reserve site visit space (Campus and Hotel)
Summer 2021	Convene subcommittees, identify subcommittee chair, and begin work
July 15, 2021	Submission of subcommittee charge and timeline to Steering Committee
By July 30, 2021	Convene Steering Committee
Early Fall 2021	Hold NECHE Self-Study Workshop
Fall 2021	Town Hall
December 1, 2021	Submission of 1st subcommittee preliminary draft, including any governance action steps
December 8-10, 2021	NECHE Annual Meeting
March 1, 2022	Review of drafts; Town Hall
April 1, 2022	Subcommittees submit 2rd draft
May 15, 2022	Subcommittee final reports due
August 15, 2022	Complete Self- Study draft
September 1, 2022	Distribute Self- Study final draft to campus community
Early Fall 2022; Completed by November 1, 2022	Hold Town Hall for discussion of final self-study
December 1, 2022	Complete final version of Self Study
April 1, 2023	Complete preparation for NECHE Site Visit

NECHE STEERING COMMITTEE REQUEST
TO THE WESTFIELD STATE UNIVERSITY BOARD OF TRUSTEES

<u>REQUEST:</u> Board of Trustees members to serve as liaisons for three NECHE Accreditation Standards
1. **Standard 3- Organization and Governance: Utilization of the Board of Trustees Governance Committee to respond to the standards related to the Governing Board**
2. **Standard 7- Institutional Resources: (1) Trustee Liaison (ex-officio)**
3. **Standard 9- Integrity, Transparency, and Public Disclosure: (1) Trustee Liaison (ex-officio)**
Deadline: July 6, 2021

OVERVIEW OF STANDARDS where Board input is needed:

<u>**Standard 3 - Organization and Governance**</u>
Request- Utilization of the WSU Board of Trustees Governance Committee to respond to the standards related to the Governing Board

- 3.3 The governing board is the legally constituted body ultimately responsible for the institution's quality and integrity. Where the institution's ownership or affiliation structure or other circumstances or requirements may involve more than one legally constituted body with authority, the institution demonstrates that the governing body with direct responsibility for the institution's quality and integrity has sufficient autonomy and control to be held accountable for meeting the Commission's Standards and to ensure that it can act in the institution's best interest and that the legally constituted bodies with authority have an aligned understanding of their respective roles.
- 3.4 The board assures representation of the public interest in its composition and reflects the areas of competence needed to fulfill its responsibilities. Two-thirds or more of the board members, including the chair, are free of any personal or immediate familial financial interest in the institution, including as employee, stockholder or shareholder, corporate director, or contractor.
- 3.5 Members of the governing board understand, accept, and fulfill their responsibilities as fiduciaries to act honestly and in good faith in the best interest of the institution toward the achievement of its educational purposes in a manner free from conflicts of interest.
- 3.6 In multi-campus systems organized under a single governing board, the division of responsibility and authority between the system office and the institution is clear. Where system and campus boards share governance responsibilities or dimensions of authority, system policies and procedures are clearly defined and equitably administered relative to the mission of the institution.
- 3.7 The board has a clear understanding of the institution's distinctive mission and exercises the authority to ensure the realization of institutional mission and purposes. The board approves and reviews institutional policies; monitors the institution's fiscal condition; and approves major new initiatives, assuring that they are compatible with institutional mission and capacity. These policies

are developed in consultation with appropriate constituencies. The board assures that the institution periodically reviews its success in fulfilling its mission and serving its students. The Board is effective in helping the institution make strategic decisions and confront unforeseen circumstances. It regularly reviews the institution's systems of enterprise risk management, external audits, regulatory compliance, internal controls, and contingency management. The board assures appropriate attention is given to succession planning for institutional leadership and, where applicable, the composition of the board itself.

- 3.8 The board systematically develops, ensures, and enhances its own effectiveness through orientation, professional development, effective self-assessment, and regular evaluation including an external perspective. The board addresses its goals for diversity within its membership. Its role and functions are effectively carried out through appropriate committees and meetings.
- 3.9 Utilizing the institutional governance structure, the board establishes and maintains appropriate and productive channels of communication among its members and with the institutional community.
- 3.10 The board appoints and periodically reviews the performance of the chief executive officer whose full-time or major responsibility is to the institution.
- 3.11 The board delegates to the chief executive officer and, as appropriate, to others the requisite authority and autonomy to manage the institution compatible with the board's intentions and the institution's mission. In exercising its fiduciary responsibility, the governing board assures that senior officers identify, assess, and manage risks and ensure regulatory compliance.
- 3.17 Through its system of board and internal governance, the institution ensures the appropriate consideration of relevant perspectives; decision-making aligned with expertise and responsibility; and timely action on institutional plans, policies, curricular change, and other key considerations.

Standard 7 – Institutional Resources
Request: One ex-officio Trustee liaison

- 7.7 The governing board understands, reviews, and approves the institution's financial plans based on multi-year analysis and financial forecasting.
- 7.8 The board retains appropriate autonomy in all budget and finance matters; this includes institutions that depend on financial support from a sponsoring entity (state, church, or other private or public entity).
- 7.10 The institution and its governing board regularly and systematically review the effectiveness of the institution's financial aid policy and practices in advancing the institution's mission and helping to ensure that the institution enrolls and supports the student body it seeks to serve.
- 7.15 Opportunities identified for new sources of revenue are reviewed by the administration and board to ensure the integrity of the institution and the quality of the academic program are maintained and enhanced. The institution planning a substantive change demonstrates the financial and administrative capacity to ensure that the new initiative meets the standards of quality of the institution and the Commission's Standards.
- 7.16 Institutional and board leadership ensure the institution's ethical oversight of its financial resources and practices.
- 7.17 The institution prepares financial statements in accordance with accounting principles generally accepted in the U.S. The annual audit is prepared by an auditor external to the institution in accord with generally accepted auditing standards adopted by the American Institute of Certified Public Accountants. Board policies and institutional practices ensure the independence and

objectivity of the auditor and the appropriate consideration of the audit by the governing board. For institutions whose financial statements are included and audited as part of a larger system or corporation, the system or corporation financial statements separately disclose financial information for each component institution to support a determination regarding the sufficiency and stability of the institution's financial resources. In all cases, the audit and management letter are appropriately reviewed by the institution's administration and governing board who take appropriate action on resulting recommendations or conclusions.

Standard 9 – Integrity, Transparency, and Public Disclosure
Request: One ex-officio Trustee liaison

- 9.1 The institution expects that members of its community, including the board, administration, faculty, staff, and students, will act responsibly, ethically, and with integrity; and it systematically supports the pursuit thereof. Institutional leadership fosters an atmosphere where issues of integrity can be openly considered, and members of the institutional community understand and assume their responsibilities in the pursuit of integrity. The pursuit of institutional integrity is strengthened through the application of findings from periodic and episodic assessments of the policies and conditions that support the achievement of these aims among members of the institutional community.
- 9.19 The institution publishes a list of its continuing faculty, indicating departmental or program affiliation, showing degrees held and the institutions granting them. The names and positions of administrative officers, and the names and principal affiliations of members of the governing board are also included.

Mission Statement Review

MISSION STATEMENT REVIEW

Establish a New Advisory Committee

Academic Affairs wishes to create an advisory committee who will review the mission statement.

The committee will consist of 2 APA, 2 Faculty, 1 Student, 1 AFSCME and 1 NUP, with a penultimate review by the campus community. The draft will then be reviewed by the Board of Trustees.

MISSION STATEMENT REVIEW

<u>Advisory Committee Charge</u>

The Mission Statement Advisory Committee will engage members of all campus constituencies in a review process of Westfield State University's mission statement.

In order to accomplish this, the Mission Statement Advisory Committee will:

- Develop a clear reporting and participatory structure that involves all campus constituencies, including alumni
- Establish a timeline for completion and revision of work
- Endeavor to complete the review in an objective manner
- **Collect and organize related data, including survey data from campus constituencies**
- Analyze data and best practice research relative to university mission statements
- Proactively collect widespread input from the campus community
- Review and edit draft documents for accuracy and readability
- Keep the campus community informed of progress through distribution of draft report sections, town hall meetings, the committee website, and regular updates
- Maintain transparency and openness in all work, respecting confidentiality where appropriate and necessary in accordance with laws and regulations
- Ensure that all constituencies have a voice in the approval of any mission statement revisions
- Make a recommendation to the Board of Trustees and the Campus Community on necessary updates on the mission, with an approval process once every two academic years, beginning in May 2022
- This work will be shared with all WSU governance committees

MISSION STATEMENT REVIEW

<u>Institute an Ongoing Assessment Process</u>

Academic Affairs requests that a review of the mission statement should be built into the Trustee Schedule every two years, starting May 2022, to facilitate ongoing assessment efforts related to the mission statement and related NECHE standards.

MISSION STATEMENT REVIEW

OVERVIEW OF STANDARDS where Mission Statement Review applies to NECHE:

Standard 1: Mission and Purposes

- 1.1 The mission of the institution defines its distinctive character, addresses the needs of society, identifies the students the institution seeks to serve, and reflects both the institution's traditions and its vision for the future. The institution's mission provides the basis upon which the institution identifies its priorities, plans its future, and evaluates its endeavors; it provides a basis for the evaluation of the institution against the Commission's Standards.

- 1.2 The institution's mission statement is formally adopted by the governing board and appears in appropriate printed and digital institutional publications.

- 1.3 The institution's purposes are concrete and realistic and further define its educational and other dimensions, including scholarship, research, and public service. Consistent with its mission, the institution endeavors to enhance the communities it serves.

- 1.4 The mission and purposes of the institution are accepted and widely understood by its governing board, administration, faculty, staff, students, and sponsoring entity (if any). They provide direction to the curricula and other activities and form the basis on which expectations for student learning are developed. Specific objectives, reflective of the institution's overall mission and purposes, are developed by the institution's individual units.

- **1.5 The institution periodically evaluates the content and pertinence of its mission and purposes, ensuring they are current and provide overall direction in planning, evaluation, and resource allocation.**

Proposal: Mission Statement Advisory Committee for Westfield State University

The University mission statement is one of its most important guiding principles. Its mission establishes its character and uniqueness, while providing a framework for its priorities, activities, and future. Best practice suggests an institution regularly and thoroughly review, evaluate, and, as necessary, revise its mission statement.

Charge: The Mission Statement Advisory Committee will engage members of all campus constituencies in a review process of Westfield State University's mission statement.

In order to accomplish this, the Mission Statement Advisory Committee will:
- Develop a clear reporting and participatory structure that involves all campus constituencies, including alumni
- Establish a timeline for completion and revision of work
- Endeavor to complete the review in an objective manner
- **Collect and organize related data, including survey data from campus constituencies**
- Analyze data and best practice research relative to university mission statements
- Proactively collect widespread input from the campus community
- Review and edit draft documents for accuracy and readability
- Keep the campus community informed of progress through distribution of draft report sections, town hall meetings, the committee website, and regular updates
- Maintain transparency and openness in all work, respecting confidentiality where appropriate and necessary in accordance with laws and regulations
- Ensure that all constituencies have a voice in the approval of any mission statement revisions.
- Make a recommendation to the Board of Trustees and the Campus Community on necessary updates on the mission, with an **approval process by the Board of Trustees once every two academic years, beginning in May 2022**.

Committee Structure:
- 2 APA members
- 2 MSCA members
- 1 AFSCME member
- 1 NUP
- 1 Student

OVERVIEW OF STANDARDS where Mission Statement Review applies to NECHE:

Standard 1: Mission and Purposes
- 1.1 The mission of the institution defines its distinctive character, addresses the needs of society, identifies the students the institution seeks to serve, and reflects both the institution's traditions and its vision for the future. The institution's mission provides the basis upon which the institution identifies its priorities, plans its future, and evaluates its endeavors; it provides a basis for the evaluation of the institution against the Commission's Standards.
- 1.2 The institution's mission statement is formally adopted by the governing board and appears in appropriate printed and digital institutional publications.
- 1.3 The institution's purposes are concrete and realistic and further define its educational and other dimensions, including scholarship, research, and public service. Consistent with its mission, the institution endeavors to enhance the communities it serves.
- 1.4 The mission and purposes of the institution are accepted and widely understood by its governing board, administration, faculty, staff, students, and sponsoring entity (if any). They provide direction to the curricula and other activities and form the basis on which expectations for student learning are developed. Specific objectives, reflective of the institution's overall mission and purposes, are developed by the institution's individual units.
- **1.5 The institution periodically evaluates the content and pertinence of its mission and purposes, ensuring they are current and provide overall direction in planning, evaluation, and resource allocation.**

The WSU Mission Statement was reviewed at Trustee Retreats on July 11 & 12, 2017 and June 13, 2018.

The current mission statement was adopted as part of the Strategic Plan, which was approved by the BHE in May, 2019.

Westfield STATE UNIVERSITY

Board of Trustees

June 29, 2021

MOTION

For the Westfield State University Board of Trustees to approve the Mission Statement Review Committee proposal and to conduct a review of the mission statement every two years, starting May 2022, to facilitate ongoing assessment efforts.

_____   _____

Kevin R. Queenin, Chair   Date

B.S. Data Science Proposal

- What is Data Science?

- Demand

- Intent and Mission

- Academic Content

- Enrollment Projections

- Resources

Data Science is an innovative discipline that will boost enrollment.
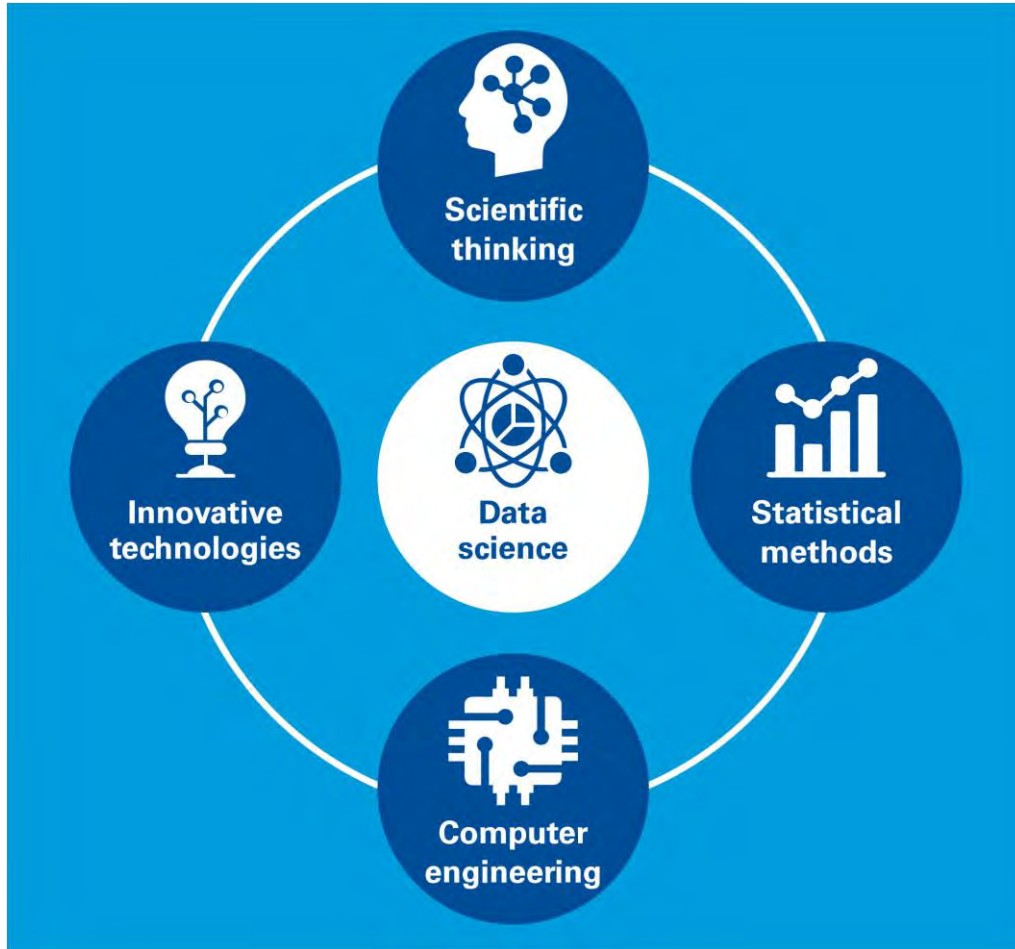
An interdisciplinary field that uses scientific methods, processes, algorithms and systems.

Goals:

- To extract knowledge and insights from structured and unstructured data

- To apply knowledge and insights from data across a broad range of application domains

Demand (EAB Market Analysis, 2018; Bureau of Labor Statistics 2021)

- Local employers advertise 4,413 job openings for bachelor's level data sciences professionals.

- Local employer demand for bachelor's-level data sciences professionals increased 72 percent in the last 4.5 years and statewide demand increased 63 percent over the same time period.

- Local and statewide financial industry employers demonstrate high demand for bachelor's-level data sciences professionals.

Westfield
STATE UNIVERSITY

Demand (EAB Market Analysis, 2018): Continued

- Local employers seek bachelor's-level data sciences professionals with "data analysis" skills in 43 percent of postings and "SQL" skills in 38 percent of postings.

- Local employers seek bachelor's-level data sciences professionals with "business analysis" " business intelligence" or "business process" skills in 36 percent of job postings over the last 12 months.

Program Intent

- Aligned to the University's Strategic Plan (2019-2024)
  - To develop robust programs to support the Commonwealth's workforce

- Aligned to the state Equity Agenda
  - To broaden participation in STEM careers
  - To reduce achievement gaps in underrepresented minorities in STEM by offering an affordable, accessible degree

- To meet the expanding needs for data professionals at all levels

Westfield
STATE UNIVERSITY

Program Mission

- Provide students with solid theoretical knowledge of math, statistics and computer science

- Train students to develop relevant programming abilities and execute statistical analyses with Python, R, SQL and other popular software

- Equip students with the ability to build and assess statistical models

Program Mission: Continued

- Train students to design, use and build a relational database

- Train students to design and develop computer information systems in real world environment

- Equip students with the ability to solve practical problems with data science and present their solutions effectively

Westfield
STATE UNIVERSITY

Westfield State's proposed program will focus on content, skills, and critical thinking.

- Emphasis on core competencies
  - Data analytics
  - Machine learning
  - Computational fluency
- Students will be engaged in applied, real-world problem solving
- Novel, interdisciplinary curricula is seamlessly integrated into
  - Mathematics department
  - Computer Science department

Westfield
STATE UNIVERSITY

Required Courses (17 courses; 56 credits)

MATH 105	Calculus 1	4
MATH 106	Calculus 2	4
MATH 201	Calculus 3	4
MATH 218	Linear Algebra	3
MATH 220	Discrete Structure	3
MATH 340	Mathematical Statistics I	3
MATH 333	Applied Statistics and Experimental Design	3
CAIS 117	Python 1	3
CAIS 217	Python 2	3

Westfield
STATE UNIVERSITY

Required Courses (17 courses; 56 credits)

CAIS 230	Data Structures/Algorithms Analysis	4
CAIS 236	Computer Organization and Architectures	4
CAIS 310	Database Management	3
CAIS 240	Software Engineering	3
CAIS 3XX	Data Mining	3
CAIS 350	Artificial Intelligence	3
DATA 3XX	Machine Learning	3
DATA 1XX	Introduction to Data Science	3

Elective Courses (3 courses; 9 credits)

CAIS 3XX	Select CAIS elective	3
MATH 3XX	Select MATH Elective	3
DATA 3xx	Data Science Capstone	3

Enrollment Projections

	Year 1	Year 2	Year 3	Year 4	Year 5
New Full-Time	25	30	30	30	30
Continuing Full-Time	0	25	55	85	115
New Part-Time	2	2	5	5	5
Continuing Part-Time	0	2	4	9	13
Totals	27	59	94	129	163

Projected Cost

Cost Categories	Year 1	Year 2	Year 3	Year 4	Year 5
Full Time Faculty (Salary & Fringe)			110,500	110,500	110,500
Part Time/Adjunct Faculty (Salary & Fringe)		6,935		13,869	13,869
Staff			15,000	15,000	15,000
General Administrative Costs	500	500	1000	1000	1000
Instructional Materials, Library Acquisitions	1,000	1,000	1,000	1,000	1,000
Facilities/Space/Equipment	95,000 (The Center for Data Science and Bioinformatics)				
Marketing	9,000				
TOTALS	**$105,500**	**$8,435**	**$127,500**	**$141,369**	**$141,369**

Projected Revenue

Revenue Sources	Year 1	Year 2	Year 3	Year 4	Year 5
Grants					
Tuition	24, 250	53,350	82,450	111,550	116,400
Fees	254,225	559,295	864,365	1,169,435	1,220,280
Departmental					
Reallocated Funds					
Other (specify) CGCE part-time tuition (assuming 4 c.h/year)	7,920	15,840	35,640	55,440	71,280
TOTALS	$286,395	$628,485	$982,455	$1,336,425	$1,407,960

Projected Yearly Balance

	Year 1	Year 2	Year 3	Year 4	Year 5
Cost Totals	$105,500	$8,435	$127,500	$141,369	$141,369
Revenue Totals	$286,395	$628,485	$982,455	$1,336,425	$1,407,960
Yearly Balance	$180,895	$620,050	$854,955	$1,195,056	$1,266,591

PROCESS OVERVIEW FOR NEW PROGRAM APPROVAL

1. Campus Prepares Letter of Intent

   Local Approval Process for Letter of Intent
   ➢ Department submits LOI and supplemental documents to Department Curriculum Committee for approval
   ➢ Department Curriculum Committee submits materials to All University Committee
   ➢ All University Committee forwards materials to the University Curriculum Committee for approval
   ➢ Department Curriculum Committee reviews materials and votes for approval
   ➢ Vote results sent back to All University Committee for approval
   ➢ All University Committee to Provost
   ➢ Provost to President
   ➢ Letter of Intent to Board of Trustees

2. Campus Submits Letter of Intent to Board of Higher Education

3. DHE's Academic Affairs Committee Reviews Letter of Intent and votes **FAST TRACK** or **STANDARD PROCESS**

FAST TRACK	STANDARD
• Campus Prepares Full proposal, submits to campus Board of Trustees, and then to Commissioner • DHE staff review full proposal and provide recommendation • Approval authority delegated to Commissioner	• AAC provides feedback for institution to address in full proposal • Campus prepares full proposal, submits to campus Board of Trustees, and then to Commissioner • DHE staff will review full proposal for completion • Campus returns to AAC for BHE approval

MEMORANDUM

TO: Dr. Roy H. Saigo, President

FROM: Dr. Juline Mills, Provost and Vice President, Academic Affairs

DATE: June 17, 2021

SUBJECT: Letter of Intent, Bachelor of Science in Data Science

---

On behalf of the Departments of Computer and Information Sciences and Mathematics, I am pleased to provide you with the attached Letter of Intent for a Bachelor of Science in Data Science for submission to the Board of Trustees. The proposed program is aligned with the *Westfield State Strategic Plan 2019-2024*, Priority 1.2. This program will prepare students for a variety of careers within the Data Sciences, focusing on the content and skills required to be competitive in a vibrant workforce.

Intent and mission

The proposed B.S. Data Science will be the only public, four-year program in western Massachusetts. Aligned to Westfield State's mission, vision, and values, the proposed program not only fulfills workforce needs in the Commonwealth, but it also demonstrates innovative programming and multi-disciplinary collaborations.

We will utilize our existing STEM partnerships in Holyoke and Springfield and strengthen partnerships in eastern and central Massachusetts to recruit a diverse population of students. While the STEM transfer pathway will support a seamless transition for our 2-year community college transfer students, we will also develop formalized articulation agreements to support the direct connections into the program.

Demand and Enrollment Projections

The EAB report confirmed the unmet workforce needs for data scientists in a variety of sectors – including biotechnology, financial, and health care. With over 4,000 jobs available and projected growth of at least 14% continuing over the next 5 years (Bureau of Labor Statistics), our graduates will be prepared for the vibrant job market.

In Spring 2020, we offered a course titled "Special Topics: Data Science Topics", which allowed us to gauge student interest in the data science major. Based on the enrollment at that time (30, used as the full-time enrollment projection for every year), an approximate attrition rates in the first year (10%) and the second year (1), an approximate 15% part-time student ratio, and the EAB report's finding of approximately 15% annual increase of regional job postings in data science (meaning that new full-time enrollment is not likely to decrease), we project that, within four years, we can reach 129 in enrollment with all of the of four-year cohorts in place.

Academic Content and Accreditation (See attached curriculum template)

The B.S. Data Science program is designed to achieve the following goals: (1) Provide students with solid theoretical knowledge of math, statistics and computer science; (2) train students to develop relevant programming abilities and execute statistical analyses with Python, R, SQL and other popular software; (3) Equip students with the ability to build and assess statistical models; (4) Train students to design, use and build a relational database; (5) Train students to design and develop computer information systems in real world environment; and (6) Equip students with the ability to solve practical problems with data science and present their solutions effectively.

The program not only includes valuable skills required to program, execute, and analyze statistical models, but it also promotes problem-solving and real-world applications of materials. Our students will develop a strong foundation and skill set, along with independent, problem-solving abilities.

Resources

We welcomed Dr. Ming Yang, our first Data Scientist, in 2019. He has been instrumental in the development of the program and coursework and will continue to serve as the instructor for all Data Science courses and will advise the new students. With a limited number of unique courses, the B.S. Data Science program will not require a significant amount of resources to commence the program. Seeing common goals, a collaboration between Data Science and Biology led to the sharing of a newly renovated (proposed FY22) "Center for Data Science and Bioinformatics" in Wilson 214. We also noted a marketing budget of $9,000 to ensure that we are promoting the program broadly. Additional resources (*e.g.,* faculty member, additional space) will be necessary as we expect an increase in enrollment and those items are outlined in the LOI.

In summary, the proposed B.S. Data Science program is aligned to statewide and Westfield State strategic initiatives and will meet the needs of our students. Thank you for your consideration of this letter of intent.

<u>**PHASE I: LETTER OF INTENT TEMPLATE**</u>
<u>**FOR BOARD VOTE ON APPROVAL PROCESS**</u>

Review Guidelines Prior to Submitting Materials
https://www.mass.edu/foradmin/academic/publicnewdegrees.asp

Information should be typed directly into the boxes below, which will expand. Letter of Intent (LOI) document should be about five to six pages in addition to appendices. After the local approval process for the LOI has been completed, the President of the institution should submit this template and all required forms addressed to the Commissioner of Higher Education, and to the Academic Affairs Committee (AAC) and Strategic Planning Committee (SPC) of the Board of Higher Education (BHE).

Submissions are required to be in MS Word format. Please direct the completed to: *awilliams@dhe.mass.edu.*

Proposed Degree Title and Intent and Mission of the Program (200 words):
The Department of Computer and Information Science and the Department of Mathematics propose a new, jointly-sponsored, undergraduate program leading to a Bachelor of Science in Data Science.

The proposed BS Data Science major emphasizes core competencies related to data analytics, machine learning, and computational fluency through applied, real-world problem solving. Our novel, interdisciplinary data science curricula will be seamlessly integrated into the mathematics and computer science departments. This program will allow our students to:

- understand modern notions in data analysis-oriented computing,
- develop the ability to build and assess data-based models,
- design and manage a variety of databases and structures,
- process data in distributed environments,
- develop Python/R coding skills to work with TensorFlow, PyTorch, Keras and other machine learning libraries,
- design computer information systems by applying analysis and design techniques,
- and confidently applying common algorithms to tackle real-world data-driven problems and communicate appropriate solutions effectively.

Proposed CIP Code: 30.7001

Chief Academic Officer (CAO) Name and Title: Juline Mills, Ph.D., Provost and Vice President for Academic Affairs

CAO Phone Number: (413) 572-5214

CAO Email: jmills@westfield.ma.edu

Has the Chief Academic Officer reviewed this LOI? Yes

Date LOI was approved by governing authority:

A. Alignment with Massachusetts Goals for Public Higher Education

The FY19 BHE Equity Statement (https://www.mass.edu/strategic/equity.asp) provides campuses with insight into the next iteration of the system-level plans. All recruitment and retention strategies will be aligned with the mission to (1) increase enrollment, (2) increase attainment, and (3) ensure long-term success of underrepresented students.

1. How does the program address institutional gaps in opportunity and achievement? How does the program align with campus goals?

The Data Science program is aligned to the University's Strategic Plan (2018-2023) which specifically identified priorities to develop robust programs that are aligned to the Commonwealth's workforce. Aligned to the state Equity Agenda, we aim to broaden participation in STEM careers and reduce achievement gaps present in underrepresented minorities (URM), particularly in STEM. The program will meet the expanding needs for data professionals at all levels, which demands a more problem-driven approach. The undergraduate Data Science major has a dual emphasis on the principles of mathematics (including calculus, linear algebra, discrete mathematics, mathematical statistics and experimental design) and computer science (including algorithms, data structures, computer systems and architectures, databases, software engineering, data mining, artificial intelligence and machine learning).

The B.S. in Data Science at a public institution of higher education will be an affordable, accessible degree to underrepresented groups. It is well-documented there are structural and social barriers in attracting a diverse population in Computer Science (Google, Inc. & Gallup, Inc., 2016). This is largely an issue of recruitment and retention in the discipline (Levitan, 2018). Despite these challenges, we recognize that a novel program with clear applications and well-planned student support services will improve the recruitment and retention of diverse populations (Colby et al., 2016). In partnership with the University's Career Center, the program will launch career interest and development events on campus for current students and prospective students to connect with industry partners. We will expand our connections with alumni who are working in the field of data science who will mentor and

support our undergraduates. In addition to career support, students will receive academic support through the Mathematics Tutoring Center and through tutoring in the Computer Sciences.

2. What program or department supports and practices are in place to ensure that students persist and complete the certifications and degrees offered by the program?

First, students will recognize that the program is achievable in four years. Advisors use a program card to demonstrate a clear pathway to completion. Persistence can be achieved through a student's sense of belonging to the major, a clear understanding of career opportunities, and academic support in challenging coursework. Data Science majors will have a dedicated faculty advisor and will receive clear advising materials (program card) that will ensure clear progression through the program. The course "Introduction to Data Science" (DATA 1XX) aims to bring Data Science to all beginners. With no prerequisites, this course will provide students with knowledge and skills in inferential thinking, computational thinking, and real-world relevance. The course introduces students to critical concepts and skills in computer programming and statistical inference, in conjunction with hands-on analysis of real-world datasets. We established a STEM tutoring program (2019) that has served over 300 students every semester, which includes Mathematics and Computer Science. In addition, we are completing construction on a dedicated Mathematics Tutoring Center (Opening Fall 2021) to provide a space that can support the inquiry-based approach to teaching and learning.

3. Please describe relevant, alliances and partnerships with PK-12, other institutions of higher education, and the employer community. If you have or plan to convene an advisory group for this proposed program, please explain. Describe how information from an advisory will be used to develop and refine the program.

Partnerships: The College of Mathematics and Sciences serves as the lead for the Pioneer Valley STEM Network (PVSTEM NET), one of nine regional networks in the Commonwealth. Multiple faculty members from WSU are members of the Advisory Committee and the Dean of the College of Mathematics and Sciences serves as the Regional Manager. Our participation in the PVSTEM NET provides us with the ability to connect with the employer community, higher education, and K-12. We will utilize this relationship to establish an advisory group for the proposed program.

Advisory Group: It is critical that we stay current in industry trends and opportunities for our students. The Data Science Advisory Committee will consist of faculty, students, alumni, and industry professionals (both data scientists and HR).   We will provide opportunities for the Advisory Group to seek input from the greater data science community, alumni, and current students to ensure that the program goals are being met. The Advisory Committee will review qualitative and quantitative data from industry and our program to help inform course and curricular changes and internship opportunities.

4. If the proposed program is designed for students to enter an employment area of demonstrated need in the regional and/or statewide labor market, provide evidence including references to workforce development plans (e.g. MassHire Regional Blueprints, https://www.mass.gov/service-details/view-your-regions-blueprint), showing market need and employer engagement. If it is not directly labor market aligned, identify the career options related to the proposed program and explain how students will be made aware of them. Do not rely on Bureau of Labor Statistics projections in this section.

Market analysis conducted by the Education Advisory Board (EAB) showed:

1. Local employers advertise 4,413 job openings for bachelor's level data sciences professionals.
2. Local employer demand for bachelor's-level data sciences professionals increased 72 percent in the last 4.5 years and statewide demand increased 63 percent over the same time period.
3. Local and statewide financial industry employers demonstrate high demand for bachelor's-level data sciences professionals.
4. Local employers seek bachelor's-level data sciences professionals with "data analysis" skills in 43 percent of postings and "SQL" skills in 38 percent of postings.
5. Local employers seek bachelor's-level data sciences professionals with "business analysis" " business intelligence" or "business process" skills in 36 percent of job postings over the last 12 months.

Educational Advisory Board, 2018, Market Demand for a Bachelor of Science in Data Sciences Program)

https://eab.com/ Market Demand for a Bachelor of Science in Data Sciences Program

6. Are there existing programs at other institutions (public and independent) in your region that offer a similar degree? If so, compare and contrast them with the proposed program.

There are only a few B.S. programs in data science in the western Massachusetts. For example, Smith College's data science program consists of 10 courses, including depth in both statistics and computer science, an integrating course in data science, a course that emphasizes communication and an application domain of expertise. The data science program in Mount Holyoke College consists of 40 credits, including courses in math, statistics, computer science and a student's chosen domain area. Compared with other programs, our major is the only BS program offered at a state institution. It has a dual emphasis on the principles of both mathematics and computer science, with foundational training in technical skills for data science. It will help the students find the most affordable and efficient path to their degree. The rigorous, interdisciplinary program prepares students for careers as data scientists, statisticians, computer program analysts, allowing students to immediately enter the workforce or pursue a graduate degree.

7. Has the proposed program been planned to include any significant digital, experiential, competency-based or other innovative approaches? Please explain and provide examples.

Digital: In CAIS 350 Artificial Intelligence, students are encouraged to take Amazon AWS Free Digital Training.

Experiential: In DATA 3XX Machine Learning, students are learning by doing with lots of hands-on work and connecting theory to practice. For example, they will develop data science applications using TensorFlow, PyTorch, Keras and other popular libraries.
Competency-based: In CAIS 3xx Data Mining, students will write data analysis code using modern statistical software and they will gain competencies that span the entirety of a knowledge domain (e.g., Java, C++, R, Python, etc.).

B. Alignment with Campus Strategic Plan and Mission

1. Describe why the proposed program is a priority, and how it supports the campus's approved strategic plan, in the context of the institution's mission.

The Westfield State University Strategic Plan (2018-2023) identified four strategic goals: Student Experience, Enrollment, Culture, and Resources. Our focus on the Student Experience includes the development of innovative programs that serve workforce needs. Westfield State University is committed to the Data Science program and specifically mentioned the program in the 2018-2023 (Priority 1.2).

http://www.westfield.ma.edu/images/uploads/strategicplan/StratPlan_Update_ApprovedVers-WEB.pdf

2. List the overall goals and learning objectives of the program and describe the strategy for achieving each goal. Use the **LOI Program Goals and Objectives** table in addition to any narrative comments.

Goal 1: Provide students with solid theoretical knowledge of math, statistics and computer science.
Learning Objectives:
- Use mathematics, statistics, data analysis, and computer science to solve and analyze real-world data science problems.

Goal 2: Train students to develop relevant programming abilities and execute statistical analyses with Python, R, SQL and other popular software.
Learning Objectives:
- Create and use computer programs to solve real-world problems.
- Apply common machine learning algorithms in practice and implementing their own.
- Execute statistical analyses with professional statistical software like R/Python.

Goal 3: Equip students with the ability to build and assess statistical models.
Learning Objectives:
- Create models using appropriate statistical methods.
- Analyze statistical and computational models in applied settings.

Goal 4: Train students to design, use and build a relational database.
Learning Objectives:
- Demonstrate proficiency with statistical analysis of real-world data sets.
- Manage data in a relational database.

Goal 5: Train students to design and develop computer information systems in real world environment.
Learning Objectives:
- Use appropriately system design notations.
- Apply system design engineering process in order to design, plan, and implement software systems.

Goal 6: Equip students with the ability to solve practical problems with data science and present their solutions effectively.
Learning Objectives:
- Apply data science tools in a variety of contexts and communicate these works professionally.

Students will achieve program goals through lecture-based and lab-based major coursework, elective courses and the final year capstone project.

C. Alignment with Operational and Financial Objectives of the Institution

1. Provide enrollment projections for the first five years of the program using the Program Enrollment form (Form C), Describe below any anticipated impact that the program may have on enrollment in other programs.

In Spring 2020, we offered a course titled "Special Topics: Data Science Topics", which allowed us to gauge student interest in the data science major. Based on the enrollment at that time (30, used as the full-time enrollment projection for every year), an approximate attrition rates in the first year (10%) and the second year (1), an approximate 15% part-time student ratio, and the EAB report's finding of approximately 15% annual increase of regional job postings in data science (meaning that new full-time enrollment is not likely to decrease), we project that, within four years, we can reach 129 in enrollment with all of the of four-year cohorts in place. Please refer to the table in Form C for year-to-year breakdown of these numbers.

Although we expect some Computer Science and Mathematics majors to switch to the Data Science major, we do not anticipate significant attrition because the Data Science major represents a substantial intersection of required courses between the two existing majors, and hence, the students will be encouraged to double-major into Data Science rather than switching over. The majority of the Mathematics majors are seeking licensure in Mathematics Education and others are interested in actuarial sciences. There is a wide variety of career goals of computer science majors, but we have very few double majors (first graduated in Spring 2021) because the existing programs do not include the Data Science outcomes.

2.. Describe the resources that the program will require (additional faculty and/or staff, space and equipment, on-line infrastructure, startup and maintenance of the program). Please include a narrative or financial statement outlining the anticipated net impact of the program on the overall financial resources of the institution. Include five years of future projections of revenue and expense using the LOI Budget form **(Form D).**

Faculty: The proposed data science curriculum requires 65 credits in major courses. As far as the student enrollments are concerned, we anticipate that, in the first year of the program, we will serve for first year majors only, and in the second year, the first- and second-year majors only, and so on. This means that, for each year of the first four years, the data science program will incur additional 15.5 credit hours' worth of courses that needs to be taught. Based on this anticipation, by the second year of the program, the existing full-time faculty (who can teach up to 24 credit hours per year) and a part-time faculty should suffice (see Form D for more detailed break-down of the cost). However, in the third year of the program, the program's course demand reaches 46.5 credits, and hence, an additional full-time faculty should be hired at that time. In the fourth year and afterwards, the total demand for courses plateaus at the full 62 credits. This will require, per year, a total of two full-time faculty (to teach the first 48 credit hours' worth of courses per year), and part-time faculty to teach the remaining 14 credit hours' worth of courses. With this plan, the part time teaching credits are kept at 36% at maximum.

Staff: It is expected that the existing administrative assistant (who is currently serving both the Math and the CAIS departments) will also serve for the Data Science program. The assistant is currently contracted to work for only 9 months of the year (i.e., spring and fall semesters). To properly compensate the assistant for the increased workload, his employment should be extended to cover the entire year by the third year of the data science program. The additional annual stipend costs for this change are shown in Form D.

Classroom: We established a collaboration with the Biology Department to construct a space called "The Center for Data Science and Bioinformatics". After renovating an old computer lab, the space will be designed for machine learning and analytics. The computing courses of the data science program will be offered in this space, outfitted with computer stations and the software (e.g., Python, R, Anaconda, Octave) necessary.

Instructional Materials, Library Acquisitions: All the software needs mentioned in this letter can be installed and used free, and we suspect that it will be so for the near future. The projected library acquisitions costs used the existing practice in the CAIS department.

3. Complete the LOI Curriculum Outline form (Form A) with course titles and credits.

4. Complete the LOI Program Goals and Objective form (Form B).

Comments and Response

The submitted LOI will be reviewed for completeness by staff. This process typically occurs within 15 business days from when it is received. Once deemed complete, the LOI is circulated by the Deputy Commissioner of Academic Affairs and Student Success (the Deputy), to the AAC and SPC members of the BHE, public campus CAO's, and to the Association of Independent Colleges and Universities of Massachusetts (AICUM) representatives for relevant comments.

Formal commentary to an LOI must come from an institution's President, be addressed to the Commissioner of Higher Education, with a cc to the Deputy, and received within 20 business days from the date the LOI is circulated.

All commentary is sent to the community colleges and state university institution, where the proposed program LOI originated. University of Massachusetts commentary is sent to the Senior Vice President for Academic Affairs, and International Relations, who is responsible to forward the information to the specific campus

Responses to any commentary are required. Responses must come from the LOI institution President and be addressed to the Commissioner of Higher Education, with a cc to the Deputy and submitted to awilliams@dhe.mass.edu. This written response to commentary must be received within 20 business days from the date it is sent to the President.

A Note About Timelines

Program review is a serve-and-return process, which means that there are several communications back and forth between the institution and DHE staff as the submission is being reviewed.

A campus should expect that an LOI (or proposal application) template submitted for staff validation and review for completion will be subject to a **15-business-day period of review**. Following this time frame the campus can expect staff to provide information regarding any further data that are needed for the LOI to be deemed complete. This communication **resets the 15-business-day time frame**. Responsibility rests with the campus to provide data in a timely manner, this may be important to a campus working within a targeted timeline for program development and launch. Once the campus has responded to staff by submitting the additional data, **the 15-business-day** clock begins anew.

After an LOI is validated and deemed complete it is circulated by the Deputy to the AAC and SPC, public campus CAO's and to AICUM representatives for commentary (as described above). The **comment period is open for 20 business days**. At the end of this time frame, all comments are reviewed by staff and sent to the LOI institution's CAO, who then has **20 business days** to submit a written response to the Deputy. Comments and responses are included in the motion brought forward for BHE action.

An LOI is brought forward either within **20 business days** of receiving the institution's response or at the next scheduled AAC meeting.

Following AAC action, the next step of the process is submission of the application proposal, which must be submitted **within two years** of the BHE action on the LOI for either a Fast Track or Standard process review.

A proposed program application template is validated and reviewed for completion **within 20 business days** of receipt. As noted above, the campus can expect staff to provide information regarding any further data that are needed for the proposal to be deemed complete. As previously noted, this communication **resets the time frame**. Once the campus has responded by submitting the additional data, **the 15-business-day** clock begins anew. Once validated and deemed complete, Fast Track proposals are forwarded to the Commissioner with a recommendation for action **within 30 business days**. The 30-business day timetable begins on the date DHE staff notify the campus that the proposal is deemed complete. BHE follows the guidelines on all proposal applications in accordance with either the Fast Track or the Standard Process.

Institution: **Proposed Degree:**
ATTACHMENTS:

Form A	**LOI Curriculum Outline**
Form B	**LOI Goals and Objectives**
Form C	**LOI Enrollment Projections**
Form D	**LOI Budget**

Institution: **Proposed Degree:**
Form A1: LOI Undergraduate Program Curriculum Outline
(Insert additional rows as necessary)

Required (Core) Courses in the Major (Total # courses required = 17)		
Course Number	Course Title	Credit Hours
MATH 105	Calculus 1	4
MATH 106	Calculus 2	4
MATH 201	Calculus 3	4
MATH 218	Linear Algebra	3
MATH 220	Discrete Structure	3
MATH 340	Mathematical Statistics I	3
MATH 333	Applied Statistics and Experimental Design	3
CAIS 117	Python 1	3
CAIS 217	Python 2	3
CAIS 230	Data Structures/Algorithms Analysis	4
CAIS 236	Computer Organization and Architectures	4
CAIS 310	Database Management	3
CAIS 240	Software Engineering	3
CAIS 3XX	Data Mining	3
CAIS 350	Artificial Intelligence	3
DATA 3XX	Machine Learning	3
DATA 1XX	Introduction to Data Science	3
	Sub Total Required Credits	56

Elective Courses (Total # courses required = 3) *(attach list of choices if needed)*		
CAIS 3XX	Select CAIS elective	3
MATH 3XX	Select MATH Elective	3
DATA 3xx	Data Science Capstone	3
	Sub Total Elective Credits	9

Institution: **Proposed Degree:**

Distribution of General Education Requirements Attach List of General Education Offerings (Course Numbers, Titles, and Credits)	43
Mathematics and the Natural and Physical Sciences	[0]
Sub Total General Education Credits	[0]
Curriculum Summary	
Total number of courses required for the degree	20
Total credit hours required for degree	
Prerequisite, Concentration or Other Requirements:	

Institution: **Proposed Degree:**
Form A2: LOI Graduate Program Curriculum Outline
(Insert additional rows as necessary.)

Major Required (Core) Courses (Total # of courses required = 0)		
Course Number	Course Title	Credit Hours
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
	Sub-total # Core Credits Required	
Elective Course Choices (Total courses required = 0) (attach list of choices if needed)		
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
[Course Number]	[Course Title]	[0]
	Sub-total # Elective Credits Required	

Institution: **Proposed Degree:**

<table>
<tr><td colspan="2" align="center">***Curriculum Summary***</td></tr>
<tr><td>Total number of courses required for the degree</td><td>[0]</td></tr>
<tr><td>Total credit hours required for degree</td><td>[0]</td></tr>
<tr><td colspan="2">***Prerequisite, Concentration or Other Requirements:***</td></tr>
</table>

Form B: LOI Goals and Objectives

Goal	Measurable Objective	Strategy for Achievement	Timetable
Provide students with solid theoretical knowledge of math, statistics and computer science.	• Use mathematics, statistics, data analysis, and computer science to solve and analyze real-world data science problems.	Lectures, interactive labs, problem sets in MATH 105 106 201 218 220	Yrs. 1&2
Train students to develop relevant programming abilities and execute statistical analyses with Python, R, SQL and other popular software.	• Create and use computer programs to solve real-world problems. • Apply common machine learning algorithms in practice and implementing their own. • Execute statistical analyses with professional statistical software like R/Python.	Lectures, interactive labs, problem sets in CAIS 117 217 230 MATH 333	Yrs. 1&2&3
Equip students with the ability to build and assess statistical models.	• Create models using appropriate statistical methods. • Analyze statistical and computational models in applied settings.	Lectures, interactive labs, problem sets in "Introduction to data science", MATH 333 340	Yrs. 1&2&3

Train students to design, use and build a relational database.	• Demonstrate proficiency with statistical analysis of real-world data sets. • Manage data in a relational database.	Lectures, interactive labs, problem sets in CAIS 310 MATH 333	Yrs. 2&3
Train students to design and develop computer information systems in real world environment.	• Use appropriately system design notations. • Apply system design engineering process in order to design, plan, and implement software systems.	Lectures, interactive labs, problem sets in CAIS 250 236	Yrs. 2&3
Equip students with the ability to solve practical problems with data science and present their solutions effectively.	• Apply data science tools in a variety of contexts and communicate these works professionally.	Take all the core courses in the DS program i.e., the capstone project	Yrs. 3&4

Form C: LOI Program Enrollment

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
New Full-Time	25	30	30	30	30
Continuing Full-Time	0	25	55	85	115
New Part-Time	2	2	5	5	5
Continuing Part-Time	0	2	4	9	13
Totals	27	59	94	129	163

Institution: **Proposed Degree:**
Form D: LOI Program Budget

One Time/ Start Up Costs							
			Annual Enrollment				
	Cost Categories	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	
	Full Time Faculty *(Salary & Fringe)*			110,500	110,500	110,500	
	Part Time/Adjunct Faculty *(Salary & Fringe)*		6,935		13,869	13,869	
	Staff			15,000	15,000	15,000	
	General Administrative Costs	500	500	1000	1000	1000	
	Instructional Materials, Library Acquisitions	1,000	1,000	1,000	1,000	1,000	
	Facilities/Space/Equipment	95,000					
	Field & Clinical Resources						
	Marketing	9,000					
	Other (Specify) software licenses						
One Time/Start-Up Support				*Annual Income*			
	Revenue Sources	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	
	Grants						

Institution: **Proposed Degree:**

	Tuition	24, 250	53,350	82,450	111,550	116,400
	Fees	254,225	559,295	864,365	1,169,435	1,220,280
	Departmental					
	Reallocated Funds					
	Other (specify) CGCE part-time tuition (assuming 4 c.h/year)	7,920	15,840	35,640	55,440	71,280
	TOTALS	$286,395	$628,485	$982,455	$1,336,425	$1,407,960

Westfield
STATE UNIVERSITY

Board of Trustees

June 29, 2021

MOTION

To approve the attached Letter of Intent for the Bachelor of Science in Data Science for submission to the Massachusetts Board of Higher Education.

_____   _____

Kevin R. Queenin, Chair   Date

STUDENT ENGAGEMENT

Engagement begins before Day 1

Student Engagement begins with the first communication sent to students. We hook them, create connections, and then retain.

Today's Goal: Quick walk through of our Engagement Timeline with our incoming and returning students.

Online Orientation Program

Provides an overview of Campus Resources, Policies, Procedures, Community Expectations, and other information.

1. This module allows our program to get the basic information completed by students at home or on the go. It allows for our in-person program to be interactive and engaging, leaving more time for making connections.

2. This program also allows us to meet the needs of students unable to attend a June program due to travel restrictions.

One-Day June Orientation Program

- Interactive Presentations
- Strong foundation in Academics
    - Faculty Meetings
    - Student Technology Usage
    - Center for Student Success and Engagement
- Community Building
    - Student Leadership Exploration and Connections
    - Orientation Team Meetings
    - Develop Familiarity with Campus
    - Personal Connections
    - Feeling of being valued members of WSU

Summer Communications

An extensive communication plan has been developed to continue student engagement over the summer months.

From the OL...

Orientation Leaders will send personal emails to their student teams at four points during the summer.

S.A.I.L. Week at a Glance

The S.A.I.L. Office will send a communication every Friday with a list of things to think about and what to expect from offices during the upcoming week.

Social Media Posts and Videos

Student Leaders are putting together Social Media Graphics and Videos to help engage students and remind them of important information related to the University.

Engaging Students in Virtual Q & A

NSO is hosting three "Westy Wednesdays" for students to join. OLs will share updates about campus happenings and be available to answer questions.

Student Leadership Opportunities

The Division of Student Affairs has several opportunities for students to take on leadership roles.

- **Orientation Leaders**
- **Student Ambassadors**
- **Resident Assistants**
- **Student Government Association**
- **Emerging Leaders Program**

Leadership Academy

A week long leadership development program for returning student leaders. This new model of leadership training for students will aid our division in :

- Consistent messaging from Division Leadership
- Building a team of leaders with cross-campus connections
- Sharing of resources and knowledge
- Developing skills to aide in the retention of First Year students

This training will take place in the middle of August prior to opening.

"Welcome to the Nest" Week

All first year students will move to campus on **Thursday, August 26th,** and will participate in our **Welcome to the Nest** Week. This five day event will include transition sessions to assist them in being successful members to their new community. These include, but are not limited to:

- Residential Life and Commuter Life Connections
- Academic Department Welcome Celebrations
- Equity and Inclusion
- Wellness Activities
- Academic Skills
- Sexual Violence Prevention
- Comprehensive Tours
- College Readiness Skill Workshops
- Student Activity Events
- Special Interest Excursions

The goal is for the University to come together in a collaborative approach to facilitate sessions.

Sophomore Specific Programs

Due to the pandemic, the Class of 2024 did not experience traditional Orientation and Welcome Programs. To support our students who may have been with us virtually, we scheduled a series of sophomore specific events.

- Campus Resource Scavenger Hunt
- Campus Tours
- Sophomore Socials

Welcome Week Programming

Sunday, August 29th, all returning students will arrive and participate with the first year and transfer students to engage and reconnect with campus and each other.

Social Events

Events hosted by S.A.I.L. Campus Activities Board, and Residential Engagement to assist students in making connections

School Spirit

Events to build Westfield State Spirit
- Club and Involvement Fair
- Pep Rally and Spirit Fire
- Kick It Up

Community Welcomes

Welcome events targeted towards specific communities of students including:
- Commuter Students
- Resident Students
- Affinity Groups

Presence Program

Manage, Track, Assess, and Engage Students
and Organizations all in one place, ONLINE.

1 **Data Collection:** Visually identify trends, compare effectiveness, and make data-driven decisions to better engagement, improving persistence and retention.

2 **Meet them Online:** Reach the modern mobile student with a real-time events app. Encourage organic adoption with custom campus branding. For phones and tablets, iOS and android.

3 **Learning Outcomes:** Help students understand how far they've come and far they have to go to achieve their goals with their SmartTranscript. It's a co-curricular transcript, just way better.

4 **Improve Efficiency:** Supporting involvement means reducing barriers and empowering leaders. Using digital tools that expedite your organization and event processes simplifies management and makes getting involved easier for unengaged students.
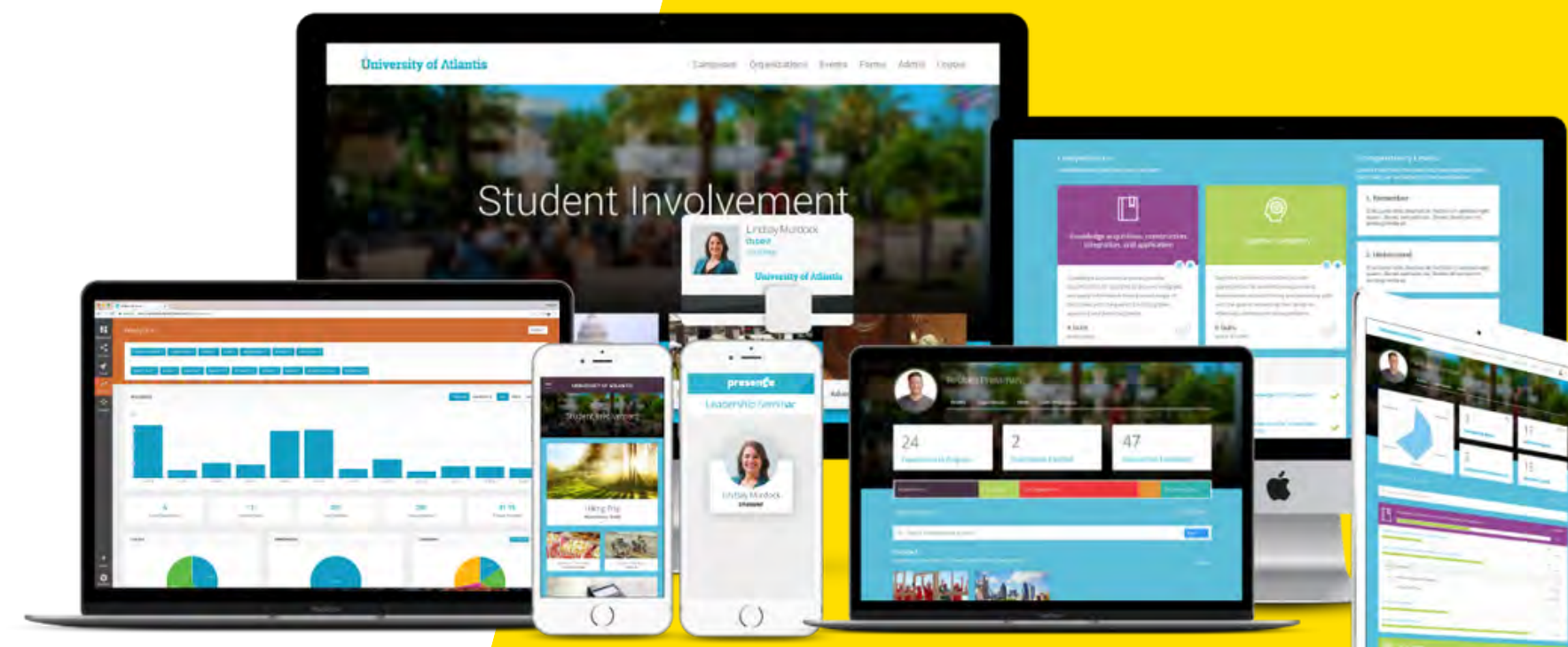
Collaborations with Academic Affairs

First Year Read
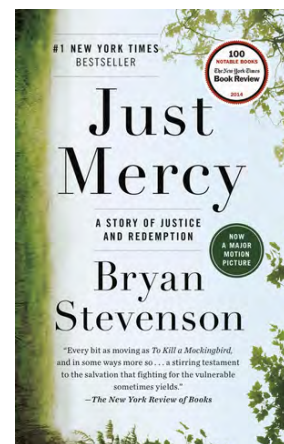
In conjunction with the Dean of Faculty the first year read will be *Just Mercy* by Bryan Stevenson.   This fall the book will be used as a catalyst for diversity, equity, and inclusion programming at Orientation.

Activities Calendar

In conjunction with Academic Affairs we have created a joint calendar that showcases events and activities available to all community members.

Wellness Wheel

In conjunction with Academic Affairs we have created categories of programming opportunities to offer holistic programming to educate the whole student.

STUDENT ENGAGEMENT

Thank You

Questions?