Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

Board of Trustees
15 Estabrooke Drive
Orono, ME 04469

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The University of Maine

University of Maine at Augusta

University of Maine at Farmington

University of Maine at Fort Kent

University of Maine at Machias

University of Maine at Presque Isle

University of Southern Maine

February 23, 2018

TO: Members of the Academic & Student Affairs Committee

FR: Ellen N. Doughty, Interim Clerk of the Board

RE: **March 5, 2018 Academic & Student Affairs Committee Meeting**

The Academic & Student Affairs Committee will meet from **3:15 pm to 5:00 pm on March 5, 2018**. The meeting will be held at the University of Maine System Executive Offices in the Rudman Conference Room, 253 Estabrooke Hall, 15 Estabrooke Drive in Orono. The following Polycom sites will also be available:

UMA Bangor – 118 Lewiston Hall
UMA – Room 125, Robinson Hall
UMF – Executive Conference Room 103, Merrill Hall
UMFK – Alumni Conference Room, Nadeau Hall
UMM – Executive Conference Room, Powers Hall
UMPI – Executive Conference Room, Preble Hall
USM – Room 419/427 Wishcamper Center, Portland
Phone – 1-800-605-5167 Passcode 743544#

Refreshments will be available at UMS and USM. The meeting materials are posted to the Diligent Board portal under the Academic and Student Affairs Committee section. In addition, the materials are posted on the Board of Trustees website (http://www.maine.edu/about-the-system/board-of-trustees/meeting-agendas/academic-student-affairs-committee/). If you have questions about the meeting arrangements or accessing the meeting materials, please call me at 581-5840.

If you have any questions or desire additional information about the agenda items, please call Robert Neely at 581-5843 or Rosa Redonnett at 621-3419.

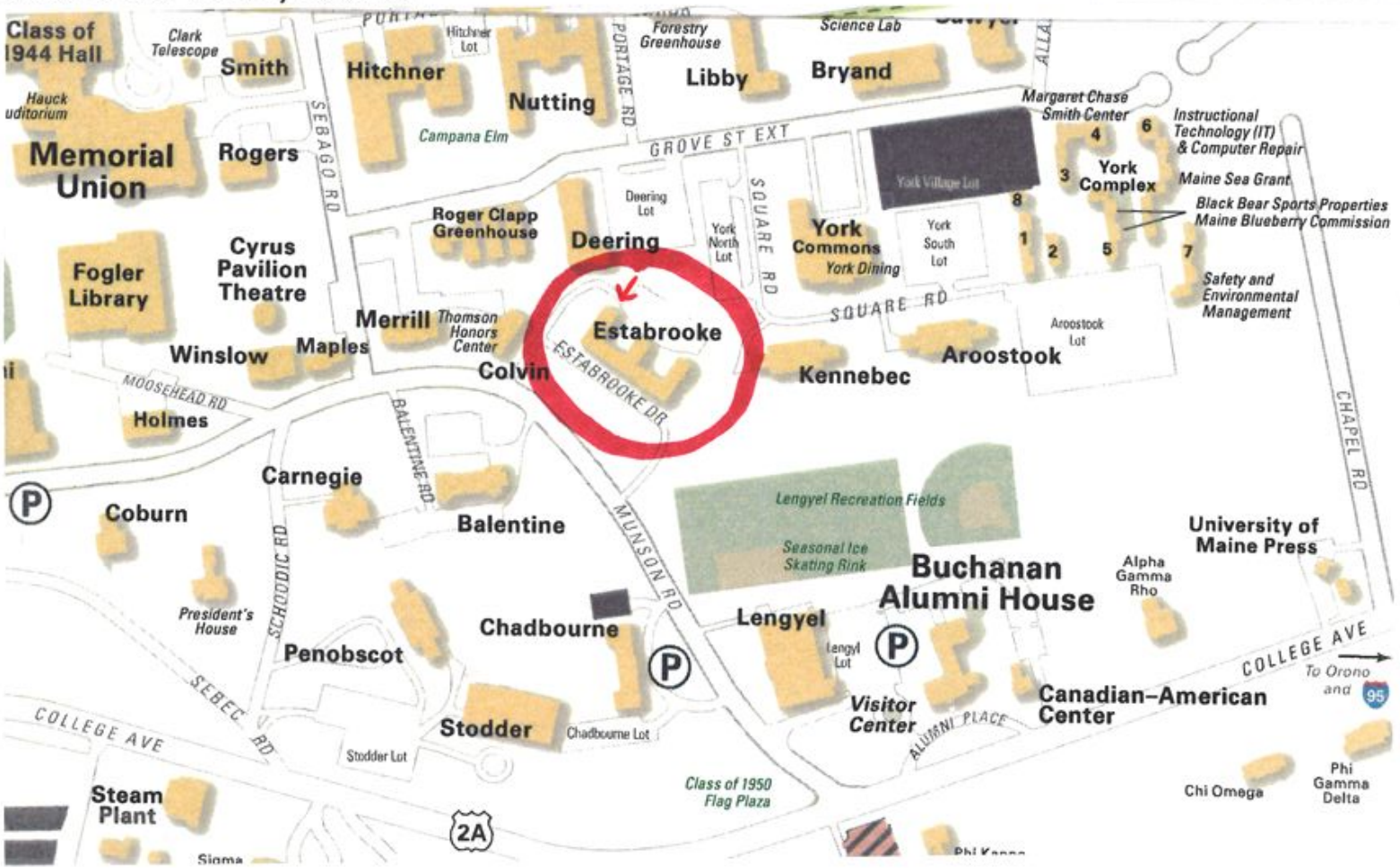
The Human Resources and Labor Relations Committee will be meeting on March 5, 2018 from 12 pm to 1:30 pm which will be followed by a joint session for the Human Resources & Labor Relations and the Academic & Student Affairs Committee from 1:30 pm to 3:00 pm. The joint session will be an executive session to review the tenure nominations for 2018.

cc: Trustees not on the Academic and Student Affairs Committee
James Page, Chancellor
Faculty & Student Representatives
Presidents
Ryan Low
Robert Neely
Rosa Redonnett

University of Maine System

15 Estabrooke Drive, Orono

Rudman Conference Room
253 Estabrooke Hall, 2nd Floor
15 Estabrooke Drive, Orono



Directions to the UMS located on the UMaine Campus

From the South on I-95: take exit 191 to Kelly Road and turn right. Continue on Kelly Road for 1 mile until you reach the traffic light, then turn left onto Route 2 and go through downtown Orono. Cross the river. Turn left at the lights onto College Avenue. Buchanan Alumni House will be the first campus-related building on your right. Right after the Buchanan Alumni House, take a right onto Muson Road. Estabrooke Hall is the building on the right after Lengyel.

From the North on I-95: take exit 191 to Kelly Road and turn left. Continue on Kelly Road for 1 mile until you reach the traffic light, then turn left onto Route 2 and go through downtown Orono. Cross the river. Turn left at the lights onto College Avenue. Buchanan Alumni House will be the first campus-related building on your right. Right after the Buchanan Alumni House, take a right onto Muson Road. Estabrooke Hall is the building on the right after Lengyel.

The UMS is located on the 2nd floor of Estabrooke Hall. Enter Estabrooke Hall from the back of the building, the entrance closes to Deering Hall.

Board of Trustees
Academic and Student Affairs Committee

March 5, 2018

University of Maine System Office
253 Estabrooke Hall, University of Maine

3:15 pm - 3:50 pm
Tab 1 — UMS Student Conduct Code

3:50 pm - 4:00 pm
Tab 2 — Spring 2018 Enrollment Report

4:00 pm -4:10 pm
Tab 3 — Program Suspension – Education (UMFK)

4:10 pm - 4:25 pm
Tab 4 — Five Year Plan to Build Up Engineering within the University of Maine System

4:25pm - 4:30 pm
Tab 5 — Academic Affairs Updates: Strategic Initiatives

- Early College Process

4:30 pm - 4:45 pm
Tab 6 — Faculty Representatives Discussion

4:45 pm - 5:00 pm
Tab 7 — Student Representatives Discussion

Action items are noted in red.

Note: Times are estimated based upon the anticipated length for presentation or discussion of a particular topic. An item may be brought up earlier or the order of items changed for effective deliberation of matters before the Committee.

Maine's Public Universities

UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

1. NAME OF ITEM: Student Conduct Code: Definitional Changes

2. INITIATED BY: Gregory G. Johnson, Chair

3. BOARD INFORMATION: **BOARD ACTION:** X

4. OUTCOME: **BOARD POLICY:**

5. BACKGROUND:

The UMS Student Conduct Code applies to the entire University of Maine System. As mandated by Board policy, the Code is reviewed and updated every three years, and is ultimately approved by the Board of Trustees. The last regular review occurred during the Spring of 2015; Board approval occurred at the May 2015 Board meeting.

David Fiacco, Director of Community Standards, Rights and Responsibilities at the University of Maine and Sara Mlynarchek, Assistant General Counsel will update the Committee on the review process, changes/clarifications to the Code and will be available to answer questions. The Academic and Student Affairs Committee will be asked to review these changes and recommend that they be approved at the March Board of Trustees meeting.

6. TEXT OF PROPOSED RESOLUTION:

That the Academic and Student Affairs Committee approves the following resolution to be forwarded to the Consent Agenda for Board of Trustees approval at the March 18-19, 2018 Board meeting:

> That the Board of Trustees approves and ratifies the updated "University of Maine System Student Conduct Code," to go into effect July 1, 2018.

2/23/18

UNIVERSITY OF MAINE SYSTEM STUDENT CONDUCT CODE

POLICY STATEMENT

The purpose of the University of Maine System Student Conduct Code (the "Code") is to promote the pursuit of activities that contribute to the intellectual, ethical, and physical development of the individuals under the auspices of the University of Maine System (the "University") and the individual campuses. The Code seeks to ensure the safety of persons engaging in those pursuits; to protect the free and peaceful expression of ideas; and to assure the integrity of various academic processes.

Students are expected to conduct their affairs with proper regard for the rights of others and of the University. All members of the University community share a responsibility for maintaining an environment where actions are guided by mutual respect, integrity, and reason.

All members of the University are governed by University policies, local ordinances, and state and federal laws. For specific governing documents, students and/or campus organizations may refer to University Policies and Procedures; campus student handbooks; campus residence hall agreements and manuals; and related notices and publications. Individuals in violation of state and federal law are subject to prosecution by appropriate state and federal authorities regardless of whether the activity occurs on or off University Property. In addition, students may be subject to disciplinary action by the University pursuant to the Code. The severity of the imposed sanctions will be appropriate to the violation and circumstances of the situation.

In seeking to encourage responsible attitudes, the University places much reliance upon personal example, counseling, and admonition. In certain circumstances where these preferred means fail, the University will rely upon the rules and procedures described in the Code.

The Officer may make minor modifications to procedure that do not materially jeopardize the fairness owed to any party, such as to accommodate summer schedules, etc.

Policy in effect at the time of the offense will apply even if the policy is changed subsequently but prior to resolution. Procedures in effect at the time of the resolution will apply to resolution of incidents, regardless of when the incident occurred.

If government regulations change in a way that impacts this document, this document will be construed to comply with government regulations in their most recent form.

IN THE ENFORCEMENT OF THE CODE, THE UNIVERSITY FUNCTIONS IN AN ADMINISTRATIVE MANNER. THE UNIVERSITY'S ADMINISTRATIVE PROCESS AFFORDS FUNDAMENTAL FAIRNESS, BUT DOES NOT FOLLOW THE TRADITIONAL COMMON LAW ADVERSARIAL METHOD OF A COURT OF LAW.

In complying with the letter and spirit of applicable laws and in pursuing its own goals of diversity, the University of Maine System does not discriminate on the grounds of race, color, religion, sex, sexual orientation, including transgender status and gender expression, national origin, citizenship status, age, disability, genetic information or veterans status in employment, education, and all other programs and activities.

The following person has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity, North Stevens Hall, Orono, ME 04469; voice: (207)581-1226; email: equal.opportunity@maine.edu.

A qualified student with a disability is entitled to reasonable accommodations in order to participate in this administrative process. Accommodations may include, but are not limited to, sign language interpretation or information in alternative formats. Students wishing to request reasonable accommodations should make those requests directly to the Officer. The Officer will consult with the appropriate campus office for students with disabilities to assist with the determination of reasonable accommodations. Students may be required to provide documentation in order for the Officer to make a determination.

I. JURISDICTION

A. The Code will apply to the following:
   1. Any person(s) registered or enrolled in any course or program offered by the University;
   2. Any person accepted to the University;

Commented [SLM1]: Added to Policy Section

Commented [SLM2]: Revised to align with BOT 401 Moved to beginning from the end of the code

Commented [SLM3]: New Paragraph

Commented [SLM4]: Section was reformatted to be in outline form so it is easier to read

3. Any recognized student organization; or
4. Any group of students not currently recognized, but under probation or suspension, by the University.

B. Persons are deemed to be enrolled at the University until such time as the student has:
1. Officially graduated from the University;
2. Been officially dismissed from the University; or
3. Not been enrolled in any course or program within the University for one calendar year.

C. Persons are also deemed to be enrolled at the University if the student:
a. Has been officially suspended from the University (persons are deemed to be enrolled during the period of their suspension), or
b. Is taking distance courses provided by or presented at a University campus.

D. The Code may be applied in cases of conduct when the alleged incident:
1. Occurs on any campus of the University, or involving any other University Property;
2. At Activities Pursued Under the Auspices of the University; or
3. In which the University can demonstrate a substantial interest as an academic institution regardless of where the conduct occurs, including online or off-campus, and in which the conduct seriously threatens: (a) any educational process; (b) legitimate function of the University; or (c) the health or safety of any individual.

E. Jurisdiction is determined on the date of the alleged incident.

Commented [SLM5]: New Provision

II. DEFINITIONS

A. **Activities Pursued Under the Auspices of the University:** Any activities specifically sponsored or participated in by the campus or by any campus organization. Such activities do not include informal off- campus gatherings of students. However, this definition will not be construed so as to limit the University's jurisdiction.

B. **Administrative Hearing Before the Officer:** A hearing before the Officer to determine if a Responding Party has violated any section(s) of the Code.

Commented [SLM6]: New definition

C. **Advisor:** A person who is available to advise or support any party involved in a Code violation investigation and resolution process. Someone acting in the capacity of an advisor may not be a witness. Examples of advisors may include, but are not limited to, family members, friends, University Employees, and attorneys.

D. **Campus Authorities:** Includes, but is not limited to, any Campus Police or Security Staff, the Officer, the Committee, and the Review Panel.

Commented [SLM7]: New definition

E. **Conduct Officer (the "Officer"):** Person(s) or designee(s) responsible for resolving alleged violations of the Code.

F. **Consent:** An individual's agreement to engage in sexual activity.

Commented [SLM8]: Reformatted to outline form

1. Consent must be:
a. Informed, freely, and actively given, and consist of a mutually agreeable and understandable exchange of words or actions.
b. Clear, knowing and voluntary.
c. Active, not passive.
2. Consent may be withdrawn at any time.
3. Silence, in and of itself, cannot be interpreted as consent.
4. Consent can be given by words or actions, as long as those words or actions create mutually understandable clear permission regarding willingness to engage in (and conditions of) sexual activity.
5. Past consent does not imply future consent.
6. Consent to engage in one form of sexual activity does not imply consent to engage in any other sexual activity.
7. Consent to engage in sexual activity with one person does not imply consent to engage in sexual activity with any other person.
8. There is no consent when the exchange involves unwanted physical force, coercion, intimidation and/or threats.
9. If an individual is mentally or physically incapacitated or impaired such that one cannot understand the fact, nature, or extent of the sexual situation, and the Incapacitation or impairment is known or should be known to a Reasonable Person, there is no consent. This includes conditions resulting from alcohol or drug consumption, or being asleep, or unconscious.
10. Consent is not valid if the person is too young to consent to sexual activity under Maine law, even if the minor wanted to engage in the activity.

G. **Formal Investigation:** A fair, thorough, and impartial process used to determine, to the fullest extent possible, if a there has

Commented [SLM9]: New definition

been a violation of the Code. Investigations include, but are not limited to, interviews with relevant parties and evidence collection.

H. **Gender Expression:** An individual's external expression of their gender identity, through such means as clothing, hair styling, jewelry, voice, and behavior.

I. **Gender Identity:** An individual's sincerely held core belief regarding their gender whether that individual identities as male, female, a blend of both, neither, or in some other way (such as, for example, an individual who identifies as "queer", "genderqueer", "bi-gender", "intersex", or "gender fluid").

J. **Hostile Environment:** Is created when harassment is:
   1. Severe, Persistent, or Pervasive; and
   2. Objectively Offensive, such that it denies or limits a person's ability to participate in or benefit from the University's programs, services, opportunities, or activities; or unreasonably interferes with an individual's academic or work performance.

   A hostile environment can be created by anyone involved in a University program or activity, such as an administrator, faculty or staff member, student, or campus guest. Offensiveness alone is not enough to create a hostile environment. Although repeated incidents increase the likelihood that a hostile environment has been created, a single serious incident, such as a Sexual Assault, can be sufficient.

   Determining whether conduct creates a hostile environment depends not only on whether the conduct was unwelcome to the person who feels harassed, but also whether a Reasonable Person in a similar situation would have perceived the conduct as objectively offensive.

   The following factors will also be considered:
      i. The degree to which the conduct affected one or more students' education or individual's employment;
      ii. The nature, scope, frequency, duration, and location of the incident(s);
      iii. The identity, number, and relationships of persons involved; and
      iv. The nature of higher education.

K. **Incapacitation:** An individual is mentally or physically incapacitated such that:
   1. The individual cannot understand the fact, nature, or extent of the situation (e.g. to understand the "who, what, when, where, why or how" of the situation); and
   2. The incapacitation is known or should be known to the Responding Party (as evaluative from the perspective of a Reasonable Person.

   This includes conditions resulting from alcohol or drug consumption, being asleep, or unconscious.

   A policy violation is not excused by the fact that the Responding Party was intoxicated and, due to that intoxication, did not realize the incapacity of the other person.

L. **Interim Measures or Actions:** Taken to promote the safety and well-being of the Parties, including, but not limited to, moving either Party to a new living, dining or working situation; issuing a no contact order; changing class or work schedules; changing transportation; financial aid accommodations; immigration assistance, and other academic and/or employment accommodations and support.

M. **Notification Standards:** Official notice from the University may be hand delivered, mailed to a student's last known address, or delivered through the use of the student's University email account.

N. **Party(ies):** The Reporting Party(ies) and Responding Party(ies), collectively.

O. **Preliminary Inquiry:** Typically one to three (1-3) days in length, this inquiry precedes a formal investigation, to determine if there is reasonable cause to believe that there has been a violation of the Code.

P. **Preponderance of the Evidence**: The standard of evidence used to determine whether the Student Conduct Code has been violated. Under this standard, a violation will be determined to have occurred if, based upon the evidence presented, the Officer, the Committee, or the Review Panel conclude that it is more likely than not that the violation was committed.

Commented [SLM10]: Divided into two separate definitions per EO director, based on MHRC memo

Commented [SLM11]: New definition – aligns with BOT 402

Commented [SLM12]: New definition

Commented [SLM13]: New definition

Commented [SLM14]: New definition

Commented [SLM15]: New definition

Q. **Reasonable Person:** A representative individual under similar circumstances and with similar identities to the person in question, who exercises care, skill, and judgment.

R. **Reporting Party:** A person who alleges harm and/or a policy violation by a student or campus organization. Where the Reporting Party does not want to participate, the University may move forward with the case. In cases of Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, however, the words "Reporting Party" shall refer only to the person who has been harmed by the alleged misconduct.

S. **Responding Party:** A student or organization that has been alleged to have violated the Code, is under Formal Investigation, or has been charged with a violation of the Code.

T. **Review Panel:** A one (1) or three (3) member panel that hears reviews from the Committee, described in Section VII.

U. **Sexual Orientation:** A person's actual or perceived sexuality or sexual identity.

V. **Student Conduct Committee (the "Committee"):** A committee comprised of representatives from campuses of the University responsible for hearing conduct cases on review after the Administrative Hearing, described in Section VI.

W. **University Employee:** Employees, including faculty, staff, students, Board of Trustees, volunteers, and agents of the University.

X. **University of Maine System Student Conduct Code (the "Code"):** This entire document.

Y. **University of Maine System (the "University"):** Means either collectively or singularly, any of the of following campuses: University of Maine at Augusta; University of Maine at Farmington; University of Maine at Fort Kent; University of Maine at Machias; University of Maine (Orono); University of Maine at Presque Isle; University of Southern Maine; University Colleges; and all University Property.

Z. **University Property:** Includes, but is not limited to, any Real or Personal Property owned, held, rented, licensed, chartered, or otherwise engaged by the University in any manner or by University Employees and/or campus organizations as a direct result of and in connection with their service to the University.
   1. Real Property: Land, buildings, fixtures, improvements, and any interests therein.
   2. Personal Property: All property, other than real property, and any interests therein. The University's computer network and all its component parts, which are not real property. Any document or record issued or purporting to be issued by the University.

AA. **Violent Crime:** Arson, assault offenses, intimidation, burglary, manslaughter, murder, destruction/damage/vandalism of property, kidnapping/abduction, and/or robbery.

Commented [SLM16]: New definition

Commented [SLM17]: Changed name from "Complainant"

Commented [SLM18]: Changed name from "Respondent"
Revised language

Commented [SLM19]: New definition

Commented [SLM20]: New definition

Commented [SLM21]: New definition

Commented [SLM22]: New definition

Commented [SLM23]: New definition

Commented [SLM24]: Revised definition to incorporate the previous four definitions:
-University Personal Property
-University Real Property
-University-Related Personal Property
-University-Related Real Property

III. Violations

Violations are activities which directly and significantly interfere with the University's (1) primary educational responsibility of ensuring the opportunity of all members of the community to attain their educational objectives, or (2) subsidiary responsibilities of protecting the health and safety of persons in the campus community, maintaining and protecting property, keeping records, providing living accommodations and other services, and sponsoring non-classroom activities such as lectures, concerts, athletic events, and social functions.

The violations listed below are considered in the context of the student's responsibility as a member of the academic community; other actions which may be considered as violations may be defined by other documents, such as, for example, residence hall contracts. Disciplinary action taken under the Code is independent of the awarding of grades (an academic matter), and provisions of the Code cannot be used for changing awarded grades.

The residence hall contract between the student and the University may specify certain other conditions which impose additional responsibilities and obligations on the residence hall student. The following violations indicate categories of conduct or activity which violate the Code.

Reporting Violations:

All reports are acted upon promptly while every effort is made by the University to preserve the privacy of such reports. Such reports may also be anonymous. Anonymous reports will be investigated to determine if remedies can be provided. Reports of alleged violations of the Code should be reported to Campus Authorities such as the University's Residence Hall staff, Dean of Students, or Officer. Reports of Gender Discrimination (including sexual harassment, dating violence, domestic violence, sexual assault or stalking) may be reported directly to the University's Title IX Coordinator/Deputy Coordinator.

The following violations are provided in order to give students reasonable warning that such conduct or attempted conduct is prohibited.

A. **Academic Misconduct**
1. **Cheating**: The act or attempted act of deception by which a student seeks to misrepresent that he/she has mastered information on an academic exercise that he/she has not mastered.
2. **Fabrication**: The use of invented information or the falsification of research or other findings in an academic exercise.
3. **Plagiarism**: The submission of another's work as one's own, without adequate attribution.
4. **Facilitating Academic Misconduct**: Assisting in another person's academic misconduct.

Commented [SLM25]: New violation

B. **Disruption of University Operations**
1. **Causing a Disturbance**: Disturbance resulting in substantial disruption of authorized activities.
2. **Failure to Comply with Sanction**: Failure to comply with or attempts to circumvent a sanction(s) imposed by the Officer, Committee, or Review Panel.
3. **Failure to Identify**: Failing to properly identify oneself to a University Employee acting in pursuit of official duties.
4. **Interference with Code Enforcement**: Interference with a Reporting Party, Responding Party, witness, investigation or the carrying out of procedures defined in the Code.
5. **Interference with or Failure to Comply with a University Employee**: Direct interference with or failure to comply with a University Employee in the performance of his/her official duties.
6. **Supplying False Information**: Knowingly supplying false information to University Employees in pursuit of their official duties or to a Committee or Review Panel in the course of a disciplinary proceeding, or knowingly causing false information to be thus supplied.
7. **Unauthorized Representation**: Unauthorized representation of the University or University Employee(s).
8. **Violation of Residence Hall Policies**: Violation of residence hall contracts, except when the residence hall contract specifically provides for an alternate procedure or remedy for the violation concerned.
9. **Violation of Student Activity Regulations**: Violation of a campus-specific or system-wide regulation, policy, standard of conduct, or code of ethics applicable to the activity in which the student is engaged, and which has been adopted, published or otherwise made known to students participating in such activity.

C. **Health & Safety Violations**
1. **Creating a Dangerous Condition**: Creation of a fire hazard or other dangerous condition.
2. **Endangering Health or Safety**: Conduct which threatens or endangers the health or safety of any individual.
3. **False Reporting of Dangerous Conditions**: Giving or causing to be given false reports of fire or other dangerous conditions.
4. **Illegal Possession, Use, or Sale of Drugs**: Illegal possession, use, or sale of drugs or drug paraphernalia. The misuse of legal prescription drugs.
5. **Interference with Safety Equipment or Alarms**: Tampering with, disabling, or causing malfunction of fire and safety equipment or alarm systems.
6. **Possession or Misuse of Weapons**: Violation of regulations concerning possession or misuse of firearms or other dangerous weapons, as defined by policies established for each campus.
7. **Restricting Traffic Flow**: Restriction of normal traffic flow into or out of University Property.
8. **Use or Possession of Chemicals or Explosives**: Unauthorized use or possession of explosive components, chemicals, etc., such as fireworks, explosives, gas or compressed air.
9. **Violation of Alcohol Policies**: Violations of University or the State of Maine alcoholic beverage regulations or laws.
10. **Violation of Health or Safety Policies**: Violation of University health or safety regulations.

Commented [SLM26]: Revised to include the misuse of legal prescription drugs

D. **Offenses Involving Other People**
1. **Causing Fear of Physical Harm**: Intentionally or recklessly placing a person or persons in reasonable fear of imminent

physical harm.

2. **Dating Violence:** Violence committed against a person by an individual who is or has been in a social relationship of a romantic or intimate nature with that person. Whether a dating relationship exists is determined based on the reporting party's statement and with consideration of the length of the relationship, the type of relationship, and the frequency of interaction between the persons involved in the relationship. Dating violence includes, but is not limited to, sexual or physical abuse or the threat of such abuse. Dating violence does not include acts covered under the definition of domestic violence. All forms of dating violence prohibited by Maine law are also included.
3. **Domestic Violence:** A felony or misdemeanor crime of violence committed by:
   a. A current or former spouse or intimate partner of the victim;
   b. A person with whom the victim shares a child in common;
   c. A person who is cohabitating with, or has cohabitated with, the victim as a spouse or intimate partner;
   d. A person similarly situated to a spouse of the victim under the domestic or family violence laws of the jurisdiction in which the crime of violence occurred, or
   e. By any other person against an adult or youth victim who is protected from that person's acts under the domestic or family violence laws of the jurisdiction in which the crime of violence occurred.

   All forms of domestic violence prohibited by Maine law are also included.
4. **Gender Discrimination**: Discriminating against an individual on the basis of that individual's gender, including, but not limited to, Dating Violence, Domestic Violence, Sexual Assault, Sexual Harassment, or Stalking.
5. **Harassment:** Repeated and/or severe acts of unwelcome behavior that creates a hostile working, educational, or living environment that unreasonably interferes with an individual's academic or job performance and opportunities.
6. **Hazing:** Any action taken or situation created by a person or an organization, or with the knowledge or Consent of an organization, which recklessly or intentionally endangers the mental or physical health of a student.
7. **Interference with Residential Life**: Significant interference with the normal residential life of others.
8. **Intimidation:** Implied or actual threats or acts that cause a reasonable fear of harm in another, and may be inferred from conduct, words, or circumstances reasonably calculated to cause fear.
9. **Invasion of Privacy:** The violation of another individual's reasonable expectation of privacy where the circumstances justify that expectation, including, but not limited to, physically trespassing in a private area with the intent of observing or eavesdropping, using an electronic device to intercept, record, amplify or broadcast a private conversation or private events, or engaging in surveillance, photographing, broadcasting, image- capturing or recording of private conversations or private events.

   The fact that the Responding Party was a party to the conversation or event is not determinative of another individual's reasonable expectation of privacy.
10. **Lewd or Indecent Behavior:** Exhibition of the genitals, anus, or pubic area of a person other than for legitimate academic purposes.
11. **Physical Assault**: Intentionally, knowingly, or recklessly causing bodily injury or offensive physical contact to another person.
12. **Retaliation:** Action taken by the University or any individual or group against any person for opposing any practices prohibited by the Code or for filing a complaint, testifying, assisting, or participating in an investigation or proceeding under the Code.

    This includes action taken against a bystander who intervened to stop or attempt to stop a violation of the Code. Retaliation includes intimidating, threatening, coercing, or in any way discriminating against an individual because of the individual's complaint or participation.

    Action is generally deemed retaliatory if it would deter a Reasonable Person in the same circumstances from opposing practices prohibited by the Code or from participating in the resolution of a complaint.

13. **Sexual Assault**: An offense that meets the definition of rape, fondling, incest, or statutory rape, as follows:
    a. Rape is the penetration, no matter how slight, of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without the Consent of the victim.
    b. Fondling is the touching of the private body parts of another person for the purpose of sexual gratification, without the Consent of the victim, including instances where the victim is incapable of giving Consent because of his/her age or because of his/her temporary or permanent mental incapacity.
    c. Incest is sexual intercourse between persons who are related to each other within the degrees wherein marriage is

Commented [SLM27]: Removed from definition section – aligns with BOT 402

Commented [SLM28]: Removed from definition section – aligns with BOT 402

Commented [SLM29]: Harassment/Intimidation was divided into two separate violations

Commented [SLM30]: Harassment/Intimidation was divided into two separate violations

Commented [SLM31]: Revised to align with BOT 402

Commented [SLM32]: Removed from definition section – aligns with BOT 402

prohibited by law.

d. Statutory rape is sexual intercourse with a person who is under the statutory age of Consent under applicable law.

All forms of sexual assault and sexual contact prohibited by Maine law are also included.

14. **Sexual Harassment:** Includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature, including sexual assault and sexual violence. Sexual harassment, including Sexual Assault, can involve persons of the same or opposite sex.

Commented [SLM33]: Removed from definition section – aligns with BOT 402

Consistent with the law, this policy prohibits two types of sexual harassment:

a. Tangible Employment or Educational Action (quid pro quo): This type of sexual harassment occurs when the terms or conditions of employment, educational benefits, academic grades or opportunities, living environment or participation in a University activity are made an explicit or implicit condition of submission to or rejection of unwelcome sexual advances or requests for sexual favors, or such submission or rejection is a factor in decisions affecting an individual's employment, education, living environment, or participation in a University program or activity. Generally, a person who engages in this type of sexual harassment is an agent or employee with some authority conferred by the University.

b. Hostile Environment: Sexual harassment that creates a hostile environment is based on sex and exists when the harassment:
   i. Is severe, pervasive, or persistent, and objectively offensive such that it denies or limits a person's ability to participate in or benefit from the University's programs, services, opportunities, or activities; or
   ii. Unreasonably interferes with an individual's academic or work performance.

A hostile environment can be created by anyone involved in a University program or activity, such as an administrator, faculty or staff member, student, or campus guest. Offensiveness alone is not enough to create a hostile environment. Although repeated incidents increase the likelihood that a hostile environment has been created, a single serious incident, such as a Sexual Assault, can be sufficient.

Determining whether conduct creates a hostile environment depends not only on whether the conduct was unwelcome to the person who feels harassed, but also whether a Reasonable Person in a similar situation would have perceived the conduct as objectively offensive.

The following factors will also be considered:

i. The degree to which the conduct affected one or more students' education or individual's employment;
ii. The nature, scope, frequency, duration, and location of the incident(s);
iii. The identity, number, and relationships of persons involved; and
iv. The nature of higher education.

15. **Sexual Misconduct:** Includes, but is not limited to, prostituting another person, nonconsensual image capturing of sexual activity, presentation or unauthorized viewing of a non-consensual videotaping of sexual activity, letting others watch you have sex without the knowledge and Consent of your sexual partner, possession of child pornography, peeping tommery, and/or knowingly transmitting an STD or HIV to another person.

Sexual misconduct may also constitute sexual harassment.

All forms of sexual misconduct prohibited by Maine law are also included.

16. **Stalking:** Engaging in a course of conduct directed at a specific person that would cause a Reasonable Person to:

Commented [SLM34]: Removed from definition section – aligns with BOT 402

a. Fear for the person's safety or the safety of others; or
b. Suffer substantial emotional distress.

For the purposes of this definition:

a. Course of conduct means two or more acts, including, but not limited to, acts in which the stalker directly, indirectly, or through third parties, by any action, method, device, or means, follows, monitors, observes, surveils, threatens, or communicates to or about a person, or interferes with a person's property.

b. Reasonable person means a reasonable person under similar circumstances and with similar identities to the victim.
c. Substantial emotional distress means significant mental suffering or anguish that may, but does not necessarily, require medical or other professional treatment or counseling.

All forms of stalking prohibited by Maine law are also included.

17. **Discriminatory Harassment**: Harassment based on actual or perceived race, color, religion, sex, Sexual Orientation, Gender Identity, Gender Expression, national origin or citizenship status, age, disability, genetic information or veteran status.
18. **Unauthorized Recording of a Conversation**: Intercepting, recording or image-capturing a University Employee in a classroom, office or over the telephone without that University Employee's Consent unless it is part of an approved reasonable accommodation.

E. **Offenses Involving Property**
1. **Defacement, Destruction, or Misuse of Property**: Intentional and/or reckless misuse, destruction, or defacement of University Property or of the property of other people without authorization.
2. **Misuse of University Computers**: Misuse of the University computer network or computers including, but not limited to, theft of computer files or data, e-mail, or other electronically stored information, probing or hacking into other computers or computer systems, spamming, sending out computer viruses, or uploading or downloading copyrighted material for personal use or distribution without authorization.
3. **Motor Vehicle Violation**: Violation of motor vehicle policies established for each campus.
4. **Tampering, Destruction, or Falsification of Records**: Tampering with, destroying, or falsifying official records.
5. **Theft or Unauthorized Use**: Theft, attempted theft, or unauthorized acquisition, removal, or use of the property of another.
6. **Trespassing**: Trespassing or unauthorized presence on any University Property, including residence halls.

F. **General Infractions**
1. **Aiding Infraction**: Knowingly assisting in the violation of any of the provisions of the Code.
2. **Continued Infraction**: Continued infractions of the Code.
3. **Conviction of a Crime**: Conviction of any crime that threatens: (a) any educational process or legitimate function of the University, or (b) the health or safety of any individual.
4. **Other Illegal Activity**: Violating local, state, or federal laws otherwise not covered under the Code.

IV. SANCTIONS

If a Responding Party admits to a violation of the Code to the Officer, Investigator, Committee or Review Panel; or upon determination by the Officer, Committee or Review Panel that a Responding Party has been found in violation of the Code, one or more of the following sanctions may be imposed in accordance with the provisions of the Code (see Section V):

A. **Assigned Educational Projects:** This may include research projects, reflective essays, counseling assessments, sanction seminars or other related assignments intended to promote learning.
B. **Community Service**: The type of service may be related to the nature of the violation.
C. **Deferred Sanction**: A specific period of time during which a sanction has been imposed but is stayed. Any further violation of the Code during that time may, at minimum result in the imposition of the deferred sanction, and any new or additional sanctions deemed necessary.
D. **Disciplinary Dismissal:** Permanent separation (subject to the right of review after five years) from the University.
1. Responding Parties who are dismissed will not be permitted to attend any of the University campuses or attend any University functions. After five (5) years from the date of the dismissal, the Responding Party may submit a written request to be readmitted to attend one of the University campuses. For a Responding Party preparing to transfer to a non-University institution who has been dismissed for a Violent Crime or Sexual Assault, a letter will be attached to the student's transcript explaining the dismissal. After five (5) years from the date of the dismissal, the Responding Party may submit a written request to have the letter attached for transfer applications to non-University institutions removed from their transcript.
2. Requests for readmission or removal of the letter attached for transfer applications will be submitted to the Officer of the campus from which the Responding Party was dismissed. The Officer will convene the campus committee designated by the President to review such requests pursuant to the campus written procedures.

E. **Disciplinary Probation**: A specified period of time when any further violation may result in additional sanctions, up to and including dismissal from the University.
F. **Disciplinary Suspension**: Separation from the University for a specific period of time and/or until a stated condition(s) is met.

Responding Parties who are suspended will not be permitted to attend any of the University campuses during the sanction period or attend any University functions. After the sanction period has been completed and all requirements of the suspension have been met, the Responding Party is eligible for readmission to any University campus. For a Responding Party preparing to transfer to a non-University institution who has been suspended for a Violent Crime or Sexual Assault, a letter will be attached to his/her transcript explaining that he/she has been suspended. If the Responding Party is transferring to a non-University institution after the sanction has been completed the letter will not be attached to the transcript.

G. **Fine**: Payment of money. Responding Parties who are unable to pay may discuss alternate payment arrangements.
H. **Loss of Contact with a Specific Person(s)**: With this sanction, the person may not initiate direct or indirect contact with a specified person(s).
I. **Loss of Visitation Privileges**: This loss of visitation may be to any designated area(s) of any University Property.
J. **Official Warning:** Official acknowledgment of a violation and the expectation that it will not be repeated.
K. **Removal from University Housing**: Removal from a particular hall or all housing.
L. **Restitution**: Restitution, up to the replacement value of the items damaged, stolen, removed, or used without authority and damages incurred.
M. **Such other action(s) as the Committee, Officer or Review Panel may reasonably deem appropriate (e.g., suspension of an organization's official campus recognition, suspension of a student from an extracurricular activity, termination from student employment, and/or academic degree revocation).**

Commented [SLM35]: Added in two new examples

The University may impose a more severe sanction on a Responding Party when the Officer, Committee, or Review Panel determines that a Responding Party intentionally selected the person or organization against whom the violation was committed, or selected the property damaged or stolen, because of the race, religion, color, sex, Sexual Orientation, Gender Identity, Gender Expression, national origin or citizenship status, age, disability, genetic information or veteran status of that person, or the persons in the organization or the owner of the property.

V. PROCEDURES

Each University campus may adopt procedures for carrying out the provisions of the Code within the guidelines set forth by the Code as described below and consistent with the Code. University campuses having a professional code of ethics may adopt additional procedural provisions to be applicable to their own students.

ADMINISTRATION AND INTERPRETATION OF THE CODE WILL BE SOLELY WITHIN THE JURISDICTION OF THE OFFICER, THE COMMITTEE OR THE REVIEW PANEL, SUCH INTERPRETATION BEING PURSUANT TO THE PROCEDURES OF THE CODE.

A. **PRELIMINARY INQUIRY**
1. Alleged violations of the Code brought to the attention of the University by University Employees, students, or members of the general public will result in the initiation of a Preliminary Inquiry. A Preliminary Inquiry will determine if there is sufficient information to warrant a Formal Investigation or informal resolution. **Before interviewing or questioning of the Parties, notification must be provided under Section V.C., Notice of Formal Investigation, unless doing so would be likely to jeopardize health or safety, or the integrity of the investigation, or lead to the destruction of evidence.**
2. Informal resolution may be used to resolve cases where:
   a. There is sufficient information to support the allegations;
   b. All parties have mutually consented to the process; and
   c. The process is acceptable to the Officer.

   The Parties have the right to end the informal process at any time and begin the formal complaint process. Mediation may not be used in cases of allegations of Sexual Assault.

3. Upon the conclusion of the Preliminary Inquiry, in accordance with Notification Standards, if the alleged violation is

Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Parties will be simultaneously notified whether no charges will be filed, a Formal Investigation will commence, or Informal Resolution will be pursued. In all other cases, only the Responding Party will be notified whether or not charges will be filed, or if a Formal Investigation will commence.

4. If, during the Preliminary Inquiry or at any point during the Formal Investigation, the Officer determines that there is no reasonable cause to conclude that the Code has been violated, the disciplinary process will end and the Responding Party will be notified. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Parties will receive simultaneous notification of the Officer's decision end the disciplinary process and both the Parties will be notified of the right of review.
5. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, once the need for a Formal Investigation has been determined, the Parties will be provided written notification of the Formal Investigation at the appropriate time during the Formal Investigation.
6. Each Officer, Committee member, and Review Panelist is expected to conduct due diligence to determine if there is a potential conflict-of-interest. If there is a conflict of interest for the Officer, the Officer will refer the matter to another Officer. If any member of the Committee or Review panel is conflicted, an alternate will be appointed. The parties have the right to raise any potential conflict-of-interest with the Officer or any member of the Committee or Review Panel.

The University aims to complete the investigation, including the Preliminary Inquiry and Formal Investigation, if any, within a sixty (60) business day time period from the date of initial notice to completion of the Formal Investigation, if any, which time period may be extended as necessary for appropriate cause.

B. **INTERIM MEASURES OR ACTIONS**

Commented [SLM36]: New section added

1. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the University may provide Interim Measures or Actions intended to address the short-term effects of the alleged Harassment, discrimination, and/or Retaliation, to the Parties and the community, and to prevent further violations of the Code. Interim Measures or Actions taken will be kept as private as reasonably practicable.
2. A Responding Party may be suspended from the University or have privileges revoked pending the outcome of a disciplinary proceeding if, in the judgment of the Officer, the Responding Party's continued presence or use of privileges at the University pending the outcome of the proceeding is likely to pose a substantial threat to the Reporting Party or to other people and/or is likely to cause significant property damage and/or disruption of or interference with the normal operations of the University. The Officer may converse with the Parties when such Interim Measures and Actions are considered.
3. Responding Parties who have been issued an Interim Measures or Actions or an interim suspension may seek review of that decision by requesting the Campus President or designee to review the decision. The Campus President or designee will review and make a determination on the request within five (5) business days of receipt.
4. In accordance with Notification Standards, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking the Officer may inform the Parties of any Interim Measures or Actions.
5. Interim Measures or Actions, including but not limited to: interim suspensions; no-contact orders; University Property usage restrictions; University account holds; and academic degree holds, will be implemented to ensure as minimal negative impact on the Parties while maintaining the safety of the University community and integrity of the investigation.
6. An enrolled student may not graduate if that student has a pending conduct case. If a student officially withdraws from the University or does not participate in the disciplinary process, the process will continue and the student may not be permitted to return to the University or graduate until the student is found not responsible for a violation of the Code or any imposed sanctions have been satisfied.

C. **NOTICE OF FORMAL INVESTIGATION**

1. Prior to commencement of a Formal Investigation, the Officer will notify the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) in writing per the Notification Standards of the following:
   a. Alleged Code violation(s);
   b. Reporting Party(ies);
   c. Date(s) of alleged occurrence(s);
   d. Maximum possible sanctions which may be imposed;

e. The procedures that will be used to resolve the complaint; and
f. Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) right of review.

D. **FORMAL INVESTIGATION**

1. Upon the Officer's decision to commence a Formal Investigation, the Officer will initiate the investigation or assign it to a trained investigator, as soon as practicable.
2. The University may undertake a short delay in its investigation when criminal charges on the basis of the same behaviors that invoked this process are being investigated. The University will promptly resume its investigation and resolution processes once notified by law enforcement that the initial evidence collection is complete.
3. All investigations will be thorough, reliable, impartial, prompt and fair. Investigations entail interviews with all relevant parties and witnesses, obtaining available evidence, and identifying sources of expert information, as necessary.
4. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, both the Parties will be given access to the relevant evidence to be used in rendering a determination and each party will be provided a full and fair opportunity to address that evidence prior to a finding being rendered.
5. The Officer and/or investigator will provide regular updates to the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) throughout the investigation, as appropriate.
6. During the Investigation the Parties may be accompanied by an Advisor.
7. If no charges are being brought at the conclusion of the Formal Investigation, the Officer will provide such notification to the Responding Party. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Parties will receive simultaneous notification of the Officer's decision not to bring charges and both the Parties will be notified of the right of review to either a committee chair or alternative hearing officer.

E. **NOTICE OF ADMINISTRATIVE HEARING BEFORE THE OFFICER**

1. If charges are being filed, the Officer will notify the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) in writing per the Notification Standards of the following:
   a. Charge(s);
   b. Reporting Party(ies);
   c. Date(s) of alleged occurrence(s);
   d. Maximum possible sanction which may be imposed;
   e. The procedures that will be used to resolve the complaint; and
   f. Date and time of the Administrative Hearing.

F. **ADMINISTRATIVE HEARING BEFORE THE OFFICER**

Commented [SLM37]: Option of either an Administrative Hearing or Committee Hearing changed to first step in adjudication process is an Administrative Hearing. Option of student hearing panel removed.

An Administrative Hearing before the Officer will be held for cases that have not been disposed of informally where there is sufficient evidence to charge a Code violation.

1. If any Party is not present at the time appointed for the hearing, the Officer will first attempt to determine the reason for that person's absence. The Officer may then proceed in a normal manner without a Party's attendance, may hear only a portion of the testimony and adjourn to a later date, or may continue the entire hearing to a later date.
   a. The Officer may not consider the absence of any Party as relevant to whether the Responding Party committed the alleged violation of the Code.
2. During the hearing the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Reporting Party), may be accompanied by an Advisor and a support person of their choice. Advisors and support people will not be permitted to speak at the hearing, except to speak with their advisee, unless permission has otherwise been granted by the Officer.
3. During the hearing, the Officer may hear and consider as evidence any relevant information.

   The Officer may not consider:
   a. Information obtained directly or indirectly through a search of a Party's or witnesses', effects, or room if a court of law has determined the search was illegal.

b. If the Officer is aware that a criminal prosecution relating to the same violation(s) is being conducted, or such action appears likely to be made, independent of the hearing, the Officer will notify the Responding Party in advance of the right to remain silent, and the Officer will draw no negative inference from the Responding Party's refusal to give information or consent to a search, except that the Responding Party had no answer or evidence to give.

4. The Officer will then:
   a. Make a determination that the Responding Party is in violation of the Code if a Preponderance of the Evidence demonstrates that the Responding Party has violated the code, or dismiss the case if the Officer determines the Responding Party is not in violation of the Code. The Officer will inform the Responding Party, in writing, of the outcome, including any sanctions imposed and any right of review.
   b. If the alleged violation is a Dating Violence, Domestic Violence, Sexual Assault, or Stalking, the Parties will receive simultaneous written notification of the outcome, including any sanctions and the rationale for the result and any sanctions, and of the Parties' right of review.
   c. If the alleged violation is Gender Discrimination or Sexual Harassment, the Reporting Party shall receive simultaneous notification of the outcome and of any sanctions that directly relate to the Reporting Party, and of the Reporting Party's right of review.
   d. In a case of a Violent Crime, the University may disclose the final results of the disciplinary proceeding to the victim(s), regardless of whether the University concluded a violation was committed.
5. If the Officer determines the Responding Party is responsible for a violation of the Code, the Officer will impose appropriate sanctions. Sanctions will become operative immediately once notice has been given to the Responding Party.
6. **Sanctions imposed as the result of the Administrative Hearing are implemented immediately unless the Officer stays their implementation in extraordinary circumstances, pending the outcome of a review hearing.** Graduation, study abroad, internships/ externships, etc. do NOT in and of themselves constitute extraordinary circumstances, and students may not be able to participate in those activities during the review period.

G. **RIGHT OF REVIEW BEYOND ADMINISTRATIVE HEARING BEFORE THE OFFICER**

1. In the event the Officer issues a sanction of suspension, dismissal, academic degree revocation, or loss of recognition of campus organizations, the Responding Party may request a review of the finding and/or sanction. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Parties have the right to a review of any finding(s) or sanction(s).
2. Requests for review will be in writing, state the issue(s) to be reviewed, and provide a detailed rationale for the request. The written request for a review will be submitted to the Officer within seven (7) calendar days after the Party(ies) has received notice of the Administrative Hearing finding(s) and shall not exceed five (5) pages in length.
3. The request for review to the Committee will be limited to the following grounds:
   a. A procedural error or omission occurred that significantly impacted the outcome of the hearing (e.g. substantiated bias, material deviation from established procedures, etc.).
   b. To consider new evidence, unknown or unavailable during the original hearing or investigation, that could substantially impact the original finding or sanction. A summary of this new evidence and its potential impact will be included in the written request for review.
   c. The sanction imposed is significantly disproportionate to the severity of the violation and/or the cumulative record of the Responding Party.
   d. Reconsideration of existing information and whether it supports the Administrative Hearing Before the Officer finding.
4. The Committee will review request(s) for review. The original finding(s) and sanction(s) will stand if the request for review is not timely or is not based on the grounds listed above in Section V.G(3), and such a decision is final.
5. The Committee review may result in: (a) a change to the finding(s); (b) a change in sanction(s), such as a higher sanction, a lower sanction, the same sanction, or no sanction at all being imposed; or (c) remand to Administrative Hearing Before the Officer.

H. **RESPONSIBILITIES OF THE COMMITTEE**

1. As soon as practicable upon receipt of the request for review, the following steps will be taken:
   a. The Committee chair will notify, in writing, the Officer and the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment,

or Stalking) of a date, place, and time for the Committee hearing. Committee hearings are normally held not earlier than five (5) calendar days and not later than fourteen (14) calendar days after issuance of the notification of hearing.

b. List in the notice to the Parties the names of the Committee member(s) conducting the review and witnesses being invited by the Committee.

c. Make arrangements for the keeping of a recorded record of the Committee hearing. In cases of a review to the Review Panel, the Responding Party charged with the violation, his/her Advisor, and authorized Campus Authorities may have access to the record for purpose of review relating to a request for review. No copies will be made except by the University. The record will be kept by the University campus for at least three (3) years after all review rights have been exhausted at which time the record may be destroyed. Records of hearings are deemed to be Student Education Records under the Family Educational Rights and Privacy Act of 1974 (FERPA) and may not be disclosed publicly except as provided in FERPA. No recording in any form, other than the one made by the Committee, is permitted at the Committee hearing. If the alleged violation is Dating Violence, Domestic Violence, Sexual Assault, or Stalking, the Reporting Party and his/her Advisor may have the same access to the recording as the Respondent. If the alleged violation is Gender Discrimination or Sexual Harassment, the Reporting Party and his/her Advisor may have access to the portions of the recording pertaining to the Reporting Party.

2. Composition of the Committee
   a. The Committee will be comprised as described in Section VI.
   b. The Parties or the Officer will have the right to challenge, for cause, any Committee member by submitting to the Committee Chair written notice stating the grounds for the challenge at least two (2) business days prior to the scheduled hearing. Removal of members for cause will be within the authority and at the discretion of the Committee Chair or another member of the Committee if the Chair is unable to exercise that function or is challenged for cause.
3. Hearing Preliminaries
   a. At any proceeding before the Committee, the Parties and witnesses may have the assistance of an Advisor.
   b. The hearing will be closed to the public. The Committee Chair may permit, in addition to the Party's Advisor, one support person for each Party to observe the proceedings. At the discretion of the Committee Chair, the Committee Chair reserves the right to close the hearing.
   c. If any Party or witness is not present at the time appointed for the hearing, the Committee will attempt to determine the reason for that party's absence. The Committee may proceed: (1) in a normal manner without their attendance; (2) hear only a portion of the testimony and adjourn to a later date; or (3) continue the entire hearing to a later date. The Committee may not consider the absence of a party as relevant to whether the Responding Party committed the alleged violation of the Code.
4. Hearing Procedures
   a. Responsibility for recognizing and permitting persons to speak lies exclusively with the Committee Chair.
   b. Persons disruptive at any stage of the hearing may be evicted at the reasonable discretion of the Committee Chair.
   c. The names of witnesses and/or copies of written statements will be submitted to the Officer at least two (2) business days prior to the hearing for inclusion in the materials presented to the Committee. At the discretion of the Committee Chair, the Parties may submit written documents, oral testimony of witnesses, and all relevant documents, records, and exhibits at the time of the hearing.
   d. The Officer will first present the results of the Preliminary Investigation, Formal Investigation, and Administrative Hearing.
   e. The Reporting Party may present oral testimony and/or written statements from any person(s) including the Responding Party, and all relevant documents, records and exhibits.
   f. The Responding Party may then present oral testimony and or written documentation themselves and/or from other witnesses, and all relevant documents, records and exhibits.
   g. At any time during the proceedings, members of the Committee may question witnesses or parties to the proceeding; witnesses or parties may only ask questions of each other at the discretion of and through the Committee Chair. **Questioning by any Advisor is not permitted.** Advisors and support people may not speak at the hearing, except to their advisee.
   h. After the presentation of all the information to the Committee, the Officer and the Responding Party (and the Reporting Party if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) may present summaries of their arguments to the Committee.
   i. During the hearing, the Committee may consider any relevant information to the grounds for appeal, will not be bound by the strict rules of legal evidence, and may take into account any information which is of value in determining the issues involved. Efforts will be made to obtain the most reliable information available.

j. After all parties have presented their respective information, the Committee will go into closed session to determine whether the Responding Party is in violation of the Code. Deliberations are not recorded. A Committee member should vote that the Responding Party is in violation of the Code only if a Preponderance of the Evidence demonstrates behavior that is in violation.
k. A simple majority vote of responsible or not responsible for a violation of the Code by the Committee members present will prevail. If the majority of the Committee votes for not responsible or there is a tie, the Responding Party will be found not responsible.
l. If a Responding Party is found to be responsible for the violation of Code, the Officer and the Responding Party (and the Reporting Party if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) may make recommendations to the Committee as to the appropriate sanctions. The Committee will go back into closed session and deliberate on sanctions. Deliberations are not recorded. A majority vote of the Committee members is needed for an imposition of a sanction(s).

5. After Committee deliberations are concluded, the Committee Chair will:
   a. Inform the Responding Party of the finding of the Committee, per the Notification Standards including:
      i. The section(s) of the Code found to have been violated;
      ii. The sanction imposed; and
      iii. The rationale for both the finding(s) and the sanction(s).
   b. If the alleged violation is a Dating Violence, Domestic Violence, Sexual Assault, or Stalking, the Committee will inform the Parties, per the Notification Standards, simultaneously of the outcome of the proceeding, the rationale for the result, any sanctions, when a decision is considered final, any changes that occur prior to finalization, and any rights of review.
   c. If the alleged violation is Gender Discrimination or Sexual Harassment in addition to informing the Complainant of the outcome of the proceedings the Committee shall inform the Complainant of any sanctions imposed upon the Respondent that directly relate to the Complainant.
   d. In a case of a Violent Crime, the University may disclose the final results of the Committee Hearing to the victim, regardless of whether the University concluded there was a violation of the Code.
6. **Sanctions imposed as the result of the Committee hearing are implemented immediately unless the Chair of the Committee stays their implementation in extraordinary circumstances, pending the outcome of a review hearing.** Graduation, study abroad, internships/ externships, etc. do NOT in and of themselves constitute extraordinary circumstances, and students may not be able to participate in those activities during the review period.

I. **RIGHT OF REVIEW BEYOND COMMITTEE**

1. In the event the Committee approves a sanction of suspension, dismissal, academic degree revocation, or loss of recognition of campus organizations, the Responding Party may request a review of the finding or sanction. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, all Parties have the right to a review of any finding(s) or sanction(s).
2. Requests for review will be in writing, state the issue(s) to be reviewed, and provide a detailed rationale for the request. The written request for a review will be submitted to the Officer within seven (7) calendar days after the Party(ies) has received notice of the Committee finding(s) and shall not exceed five (5) pages in length.
3. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the review request will be shared with the other Party(ies), who may file a response within five (5) calendar days and/or bring their own review on separate grounds within the original timeframe. If new grounds are raised, the party requesting the review will be permitted to submit a written response to these new grounds within five (5) calendar days. This response will be shared with all Parties.
4. Campus president or designee, will appoint a Review Panel as described in Section VII below.
5. The request for review to the Review Panel will be limited to the following grounds:
   a. A procedural error or omission occurred that significantly impacted the outcome of the process (e.g. substantiated bias, material deviation from established procedures, etc.).
   b. To consider new evidence, unknown or unavailable during the original hearing or investigation, that could substantially impact the original finding or sanction. A summary of this new evidence and its potential impact will be included.
   c. The sanction imposed is significantly disproportionate to the severity of the violation and the cumulative record of the Responding Party.
6. The Review Panel will review request(s) for review. The original finding(s) and sanction(s) will stand if the request for review is not timely or is not based on the grounds listed above in Section V.H(5), and such a decision is final.

Commented [SLM38]: Page limited added

7. If the Review Panel finds that at least one of the review grounds is met by at least one party, additional principles governing the hearing of review will include the following:
   a. The Review Panel may make changes to the finding only where there is clear error and to the sanction(s) only if there is a compelling justification to do so.
   b. A review hearing is not intended to be a full re-hearing (de novo) of the allegation(s). A review to the Review Panel is limited to a review of the written documentation and recorded record of the Committee hearing regarding the grounds for review, and any new information provided by Parties. A review is not an opportunity for the Review Panel to substitute their judgment for that of the Committee merely because it disagrees with the Committee finding(s) and/or sanction(s). Reviews may be remanded to the original Committee or Officer at the discretion of the Review Panel. A remand to the original Committee or Officer can not be reviewed.
   c. In accordance with the Notification Standards, the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) will be informed of whether the grounds for a review are accepted and of the results of the review decision or remand.
   d. A majority vote of the Review Panel will prevail.
   e. Once the Review Panel has made a decision, the outcome is final. Further reviews are not permitted, even if a decision or sanction is changed on remand, except in the case of a new hearing before a new Committee or Officer, if ordered by the Review Panel.
   f. In accordance with the Notification Standards, the Responding Party (and the Responding Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) will be informed in writing of the outcome of the Review Panel.
   g. In a case of a Violent Crime the University may disclose the final results of the Review Panel to the victim, regardless of whether the University concluded a violation was committed.
8. In rare cases where a procedural (or substantive) error cannot be cured by the Review Panel (as in cases of bias), the Review Panel may recommend a new hearing with a new Committee. The results of the new Committee hearing may be reviewed, once, on any of the three (3) applicable grounds for review stated in Section V.H(5) above.
9. In cases where the review results in reinstatement to the University or resumption of privileges, all reasonable attempts will be made to restore the Responding Party to his/her/their/its prior status.

VI. STUDENT CONDUCT COMMITTEE COMPOSITION

Commented [SLM39]: New section – defines who can serve on a committee

A. Committee members will be identified by campus presidents or their designee(s).
B. Each University campus will identify from their respective campus, at least three (3) people, who can serve as trained Committee members, each in the following categories:
   1. Enrolled students;
   2. Faculty members; and
   3. Staff members.
C. Each hearing Committee will have at least three (3) and no more than seven (7) members consisting of:
   1. Committee Chair who is either a faculty or staff member;
   2. At least one (1) enrolled student; and
   3. At least one (1) faculty or staff member.
D. All members of a hearing Committee will avoid both the appearance and reality of any conflict of interest. Any Committee member who has a potential conflict of interest or feels that s/he is unable to render an unbiased decision in the case will decline assignment to that Committee.
E. The composition of the Committee will have equitable gender representation whenever practicable.

VII. REVIEW PANEL COMPOSITION

Commented [SLM40]: New section – defines who can serve on a review panel.
Option of either a one person or three people panel added

A. At the discretion of each campus president or designee, the Review Panel shall consist of either:
   1. One (1) person who is a faculty or staff member, as identified by the campus president or designee; or
   2. Three (3) members which shall include:
      a. One (1) faculty or staff member identified by the campus president;
      b. One (1) enrolled student; and
      c. One (1) Committee member.
B. All Review Panel members may not have previous involvement with the current matter. All members of a Review Panel will avoid both the appearance and reality of any conflict of interest. Any Review Panel member who has a potential conflict of interest or feels that s/he is unable to render an unbiased decision in the case will decline assignment to that Review Panel.

VIII. TRAINING

A. The following individuals will have annual training on issues related to Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking and how to conduct an investigation and hearing process that protects the safety of individuals involved and promotes accountability:
   1. Campus presidents' designee(s);
   2. Officers;
   3. Individuals responsible for conducting Preliminary Inquiry or Formal Investigations;
   4. Committee members; and
   5. Review Panel members.

Commented [SLM41]: New section – training requirements are consolidated here, instead spread out throughout the code.

IX. SPECIFIC PROCEDURES WITH RESPECT TO DATING VIOLENCE, DOMESTIC VIOLENCE, SEXUAL ASSAULT, OR STALKING

The University prohibits Dating Violence, Domestic Violence, Sexual Assault, or Stalking. In such cases, the University will provide a prompt, fair, and impartial investigation and resolution. This process will be conducted by University Employees who receive annual training on these issues, and on how to conduct an investigation and hearing process that protects the safety of individuals involved and promotes accountability.

A. Reporting a Violation
   1. Individuals may elect to report an incident to Campus Authorities, local law enforcement, both, or neither.
   2. Should a Reporting Party elect to report an incident to local law enforcement, Campus Authorities are available to assist with this process at the Reporting Party's request.
   3. Reporting Parties should, if possible, attempt to preserve any evidence. This evidence could prove crucial should the Reporting Party choose to report a violation of the Code, report a criminal act to local law enforcement, or seek an order of protection from abuse or harassment from the courts.
   4. As with other violations of the Code, and in accordance with federal law, the Preponderance of the Evidence standard will be used to determine whether a violation of the Code has occurred.

B. Sanctions and Protective Measures
   1. Separate from the sanctions outlined in Section IV, it is within the University's power to impose remedial measures for the Parties.
   2. Even if a Reporting Party chooses not to pursue disciplinary proceedings under the Code or report the incident to law enforcement, the Reporting Party should consider talking to Title IX Coordinator or the Deputy Coordinator about the possibility of remedial measures, as many measures (such as counseling or changing classes) may be possible regardless of whether an investigation is initiated.
   3. Examples of possible remedial measures include:
      1. Changes in housing, classes, or transportation in order to avoid contact between the Parties;
      2. No-contact directives; and
      3. Helping connect the Parties to access services on campus and in the community, including counseling.
   4. Additional information on resources, including details about free on-campus counseling services and other resources on campus and in the community, may be found in the University's policy pamphlet on sexual assault, domestic violence, dating violence, and stalking.

C. Confidentiality
   1. Under federal law, the University is required to report statistics regarding the occurrence of certain crimes in the University community. When reporting these statistics the University withholds the names of Parties as confidential and, to the extent permissible by law, withholds any other information that may serve to identify the Parties.
   2. If a Reporting Party requests that their name or other identifiable information not be disclosed to the Responding Party, the University's ability to respond to the incident and pursue disciplinary action may be limited. Reporting Parties should note that, under Title IX of the Education Amendments of 1972, retaliation against a Party is prohibited. University Employees will take steps to prevent retaliation and will take responsive action if retaliation is found to have occurred.

X. STUDENT CONDUCT CODE REVIEW BOARD

A. The Student Conduct Code Review Board will be responsible for:
   1. Considering all proposed amendments to the Code and acting as an advisor to the Board of Trustees in matters pertaining to the Code; and
   2. Sending recommendations on proposed amendments of the Code to the President's Council and Chancellor for transmission to the Board of Trustees.

B. The Student Conduct Code Review Board will be composed of the following:
   1. From each campus of the University:
      a. One (1) Officer;
      b. One (1) Committee chair; and
      c. One (1) enrolled student appointed by the President or his/her designee after seeking nominations from student representatives.
   2. One (1) enrolled student who is in a distance education program. This enrolled student will be appointed by the Vice Chancellor for Academic Affairs or his/her designee.
   3. One (1) representative from the Board of Trustees.
   4. One (1) representative appointed by Chancellor.
C. The Chancellor's representative will be responsible for calling the Student Conduct Code Review Board into session.
D. The Student Conduct Code Review Board will meet at least once every three (3) years, but may meet more often when requested by the following:
   1. Officers representing at least two (2) campuses of the University;
   2. Student government officers representing at least two (2) campuses of the University; or
   3. The Chancellor.

XI. AMENDING THE STUDENT CONDUCT CODE

The Board of Trustees will act upon proposed amendments to the Code after receiving recommendations of the Student Conduct Code Review Board, the President's Council of the University System, and the Chancellor. As provisions of the Code are subject to periodic review and change, the most recent and current copy of the Code may be obtained through the University of Maine System Chief Student Affairs Office or the Student Affairs Office on each campus.

Revised by the Student Conduct Code Review Board and accepted by the Board of Trustees, XXXXXXXX/
Effective Date: July 1, 2018

UNIVERSITY OF MAINE SYSTEM STUDENT CONDUCT CODE

POLICY STATEMENT

The purpose of the University of Maine System Student Conduct Code (the “Code") is to promote the pursuit of activities that contribute to the intellectual, ethical, and physical development of the individuals under the auspices of the University of Maine System (the "University") and the individual campuses. The Code seeks to ensure the safety of persons engaging in those pursuits; to protect the free and peaceful expression of ideas; and to assure the integrity of various academic processes.

Students are expected to conduct their affairs with proper regard for the rights of others and of the University. All members of the University community share a responsibility for maintaining an environment where actions are guided by mutual respect, integrity, and reason.

All members of the University are governed by University policies, local ordinances, and state and federal laws. For specific governing documents, students and/or campus organizations may refer to University Policies and Procedures; campus student handbooks; campus residence hall agreements and manuals; and related notices and publications. Individuals in violation of state and federal law are subject to prosecution by appropriate state and federal authorities regardless of whether the activity occurs on or off University Property. In addition, students may be subject to disciplinary action by the University pursuant to the Code. The severity of the imposed sanctions will be appropriate to the violation and circumstances of the situation.

In seeking to encourage responsible attitudes, the University places much reliance upon personal example, counseling, and admonition. In certain circumstances where these preferred means fail, the University will rely upon the rules and procedures described in the Code.

The Officer may make minor modifications to procedure that do not materially jeopardize the fairness owed to any party, such as to accommodate summer schedules, etc.

Policy in effect at the time of the offense will apply even if the policy is changed subsequently but prior to resolution. Procedures in effect at the time of the resolution will apply to resolution of incidents, regardless of when the incident occurred.

If government regulations change in a way that impacts this document, this document will be construed to comply with government regulations in their most recent form.

IN THE ENFORCEMENT OF THE CODE, THE UNIVERSITY FUNCTIONS IN AN ADMINISTRATIVE MANNER. THE UNIVERSITY'S ADMINISTRATIVE PROCESS AFFORDS FUNDAMENTAL FAIRNESS, BUT DOES NOT FOLLOW THE TRADITIONAL COMMON LAW ADVERSARIAL METHOD OF A COURT OF LAW.

In complying with the letter and spirit of applicable laws and in pursuing its own goals of diversity, the University of Maine System does not discriminate on the grounds of race, color, religion, sex, sexual orientation, including transgender status and gender expression, national origin, citizenship status, age, disability, genetic information or veterans status in employment, education, and all other programs and activities.

The following person has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity, North Stevens Hall, Orono, ME 04469; voice: (207)581-1226; email: equal.opportunity@maine.edu.

A qualified student with a disability is entitled to reasonable accommodations in order to participate in this administrative process. Accommodations may include, but are not limited to, sign language interpretation or information in alternative formats. Students wishing to request reasonable accommodations should make those requests directly to the Officer. The Officer will consult with the appropriate campus office for students with disabilities to assist with the determination of reasonable accommodations. Students may be required to provide documentation in order for the Officer to make a determination.

I. JURISDICTION

A. The Code will apply to the following:
   1. Any person(s) registered or enrolled in any course or program offered by the University;
   2. Any person accepted to the University;

3. Any recognized student organization; or
4. Any group of students not currently recognized, but under probation or suspension, by the University.

B. Persons are deemed to be enrolled at the University until such time as the student has:
   1. Officially graduated from the University;
   2. Been officially dismissed from the University; or
   3. Not been enrolled in any course or program within the University for one calendar year.

C. Persons are also deemed to be enrolled at the University if the student:
   a. Has been officially suspended from the University (persons are deemed to be enrolled during the period of their suspension), or
   b. Is taking distance courses provided by or presented at a University campus.

D. The Code may be applied in cases of conduct when the alleged incident:
   1. Occurs on any campus of the University, or involving any other University Property;
   2. At Activities Pursued Under the Auspices of the University; or
   3. In which the University can demonstrate a substantial interest as an academic institution regardless of where the conduct occurs, including online or off-campus, and in which the conduct seriously threatens: (a) any educational process; (b) legitimate function of the University; or (c) the health or safety of any individual.

E. Jurisdiction is determined on the date of the alleged incident.

II. DEFINITIONS

A. **Activities Pursued Under the Auspices of the University:** Any activities specifically sponsored or participated in by the campus or by any campus organization. Such activities do not include informal off- campus gatherings of students. However, this definition will not be construed so as to limit the University's jurisdiction.

B. **Administrative Hearing Before the Officer:** A hearing before the Officer to determine if a Responding Party has violated any section(s) of the Code.

C. **Advisor:** A person who is available to advise or support any party involved in a Code violation investigation and resolution process. Someone acting in the capacity of an advisor may not be a witness. Examples of advisors may include, but are not limited to, family members, friends, University Employees, and attorneys.

D. **Campus Authorities:** Includes, but is not limited to, any Campus Police or Security Staff, the Officer, the Committee, and the Review Panel.

E. **Conduct Officer (the "Officer"):** Person(s) or designee(s) responsible for resolving alleged violations of the Code.

F. **Consent:** An individual's agreement to engage in sexual activity.
   1. Consent must be:
      a. Informed, freely, and actively given, and consist of a mutually agreeable and understandable exchange of words or actions.
      b. Clear, knowing and voluntary.
      c. Active, not passive.
   2. Consent may be withdrawn at any time.
   3. Silence, in and of itself, cannot be interpreted as consent.
   4. Consent can be given by words or actions, as long as those words or actions create mutually understandable clear permission regarding willingness to engage in (and conditions of) sexual activity.
   5. Past consent does not imply future consent.
   6. Consent to engage in one form of sexual activity does not imply consent to engage in any other sexual activity.
   7. Consent to engage in sexual activity with one person does not imply consent to engage in sexual activity with any other person.
   8. There is no consent when the exchange involves unwanted physical force, coercion, intimidation and/or threats.
   9. If an individual is mentally or physically incapacitated or impaired such that one cannot understand the fact, nature, or extent of the sexual situation, and the Incapacitation or impairment is known or should be known to a Reasonable Person, there is no consent. This includes conditions resulting from alcohol or drug consumption, or being asleep, or unconscious.
   10. Consent is not valid if the person is too young to consent to sexual activity under Maine law, even if the minor wanted to engage in the activity.

G. **Formal Investigation:** A fair, thorough, and impartial process used to determine, to the fullest extent possible, if a there has

been a violation of the Code. Investigations include, but are not limited to, interviews with relevant parties and evidence collection.

H. **Gender Expression:** An individual's external expression of their gender identity, through such means as clothing, hair styling, jewelry, voice, and behavior.

I. **Gender Identity:** An individual's sincerely held core belief regarding their gender whether that individual identities as male, female, a blend of both, neither, or in some other way (such as, for example, an individual who identifies as "queer", "genderqueer", "bi-gender", "intersex", or "gender fluid").

J. **Hostile Environment:** Is created when harassment is:
   1. Severe, Persistent, or Pervasive; and
   2. Objectively Offensive, such that it denies or limits a person's ability to participate in or benefit from the University's programs, services, opportunities, or activities; or unreasonably interferes with an individual's academic or work performance.

   A hostile environment can be created by anyone involved in a University program or activity, such as an administrator, faculty or staff member, student, or campus guest. Offensiveness alone is not enough to create a hostile environment. Although repeated incidents increase the likelihood that a hostile environment has been created, a single serious incident, such as a Sexual Assault, can be sufficient.

   Determining whether conduct creates a hostile environment depends not only on whether the conduct was unwelcome to the person who feels harassed, but also whether a Reasonable Person in a similar situation would have perceived the conduct as objectively offensive.

   The following factors will also be considered:
      i. The degree to which the conduct affected one or more students' education or individual's employment;
      ii. The nature, scope, frequency, duration, and location of the incident(s);
      iii. The identity, number, and relationships of persons involved; and
      iv. The nature of higher education.

K. **Incapacitation:** An individual is mentally or physically incapacitated such that:
   1. The individual cannot understand the fact, nature, or extent of the situation (e.g. to understand the "who, what, when, where, why or how" of the situation); and
   2. The incapacitation is known or should be known to the Responding Party (as evaluative from the perspective of a Reasonable Person.

   This includes conditions resulting from alcohol or drug consumption, being asleep, or unconscious.

   A policy violation is not excused by the fact that the Responding Party was intoxicated and, due to that intoxication, did not realize the incapacity of the other person.

L. **Interim Measures or Actions:** Taken to promote the safety and well-being of the Parties, including, but not limited to, moving either Party to a new living, dining or working situation; issuing a no contact order; changing class or work schedules; changing transportation; financial aid accommodations; immigration assistance, and other academic and/or employment accommodations and support.

M. **Notification Standards:** Official notice from the University may be hand delivered, mailed to a student's last known address, or delivered through the use of the student's University email account.

N. **Party(ies):** The Reporting Party(ies) and Responding Party(ies), collectively.

O. **Preliminary Inquiry:** Typically one to three (1-3) days in length, this inquiry precedes a formal investigation, to determine if there is reasonable cause to believe that there has been a violation of the Code.

P. **Preponderance of the Evidence**: The standard of evidence used to determine whether the Student Conduct Code has been violated. Under this standard, a violation will be determined to have occurred if, based upon the evidence presented, the Officer, the Committee, or the Review Panel conclude that it is more likely than not that the violation was committed.

Q. **Reasonable Person:** A representative individual under similar circumstances and with similar identities to the person in question, who exercises care, skill, and judgment.

R. **Reporting Party:** A person who alleges harm and/or a policy violation by a student or campus organization. Where the Reporting Party does not want to participate, the University may move forward with the case. In cases of Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, however, the words "Reporting Party" shall refer only to the person who has been harmed by the alleged misconduct.

S. **Responding Party:** A student or organization that has been alleged to have violated the Code, is under Formal Investigation, or has been charged with a violation of the Code.

T. **Review Panel:** A one (1) or three (3) member panel that hears reviews from the Committee, described in Section VII.

U. **Sexual Orientation:** A person's actual or perceived sexuality or sexual identity.

V. **Student Conduct Committee (the "Committee"):** A committee comprised of representatives from campuses of the University responsible for hearing conduct cases on review after the Administrative Hearing, described in Section VI.

W. **University Employee:** Employees, including faculty, staff, students, Board of Trustees, volunteers, and agents of the University.

X. **University of Maine System Student Conduct Code (the "Code"):** This entire document.

Y. **University of Maine System (the "University"):** Means either collectively or singularly, any of the of following campuses: University of Maine at Augusta; University of Maine at Farmington; University of Maine at Fort Kent; University of Maine at Machias; University of Maine (Orono); University of Maine at Presque Isle; University of Southern Maine; University Colleges; and all University Property.

Z. **University Property:** Includes, but is not limited to, any Real or Personal Property owned, held, rented, licensed, chartered, or otherwise engaged by the University in any manner or by University Employees and/or campus organizations as a direct result of and in connection with their service to the University.
   1. Real Property: Land, buildings, fixtures, improvements, and any interests therein.
   2. Personal Property: All property, other than real property, and any interests therein. The University's computer network and all its component parts, which are not real property. Any document or record issued or purporting to be issued by the University.

AA. **Violent Crime:** Arson, assault offenses, intimidation, burglary, manslaughter, murder, destruction/damage/vandalism of property, kidnapping/abduction, and/or robbery.

III. Violations

Violations are activities which directly and significantly interfere with the University's (1) primary educational responsibility of ensuring the opportunity of all members of the community to attain their educational objectives, or (2) subsidiary responsibilities of protecting the health and safety of persons in the campus community, maintaining and protecting property, keeping records, providing living accommodations and other services, and sponsoring non-classroom activities such as lectures, concerts, athletic events, and social functions.

The violations listed below are considered in the context of the student's responsibility as a member of the academic community; other actions which may be considered as violations may be defined by other documents, such as, for example, residence hall contracts. Disciplinary action taken under the Code is independent of the awarding of grades (an academic matter), and provisions of the Code cannot be used for changing awarded grades.

The residence hall contract between the student and the University may specify certain other conditions which impose additional responsibilities and obligations on the residence hall student. The following violations indicate categories of conduct or activity which violate the Code.

Reporting Violations:

All reports are acted upon promptly while every effort is made by the University to preserve the privacy of such reports. Such reports may also be anonymous. Anonymous reports will be investigated to determine if remedies can be provided. Reports of alleged violations of the Code should be reported to Campus Authorities such as the University's Residence Hall staff, Dean of Students, or Officer. Reports of Gender Discrimination (including sexual harassment, dating violence, domestic violence, sexual assault or stalking) may be reported directly to the University's Title IX Coordinator/Deputy Coordinator.

The following violations are provided in order to give students reasonable warning that such conduct or attempted conduct is prohibited.

A. **Academic Misconduct**

1. **Cheating**: The act or attempted act of deception by which a student seeks to misrepresent that he/she has mastered information on an academic exercise that he/she has not mastered.
2. **Fabrication**: The use of invented information or the falsification of research or other findings in an academic exercise.
3. **Plagiarism**: The submission of another's work as one's own, without adequate attribution.
4. **Facilitating Academic Misconduct**: Assisting in another person's academic misconduct.

B. **Disruption of University Operations**

1. **Causing a Disturbance**: Disturbance resulting in substantial disruption of authorized activities.
2. **Failure to Comply with Sanction**: Failure to comply with or attempts to circumvent a sanction(s) imposed by the Officer, Committee, or Review Panel.
3. **Failure to Identify**: Failing to properly identify oneself to a University Employee acting in pursuit of official duties.
4. **Interference with Code Enforcement**: Interference with a Reporting Party, Responding Party, witness, investigation or the carrying out of procedures defined in the Code.
5. **Interference with or Failure to Comply with a University Employee**: Direct interference with or failure to comply with a University Employee in the performance of his/her official duties.
6. **Supplying False Information**: Knowingly supplying false information to University Employees in pursuit of their official duties or to a Committee or Review Panel in the course of a disciplinary proceeding, or knowingly causing false information to be thus supplied.
7. **Unauthorized Representation**: Unauthorized representation of the University or University Employee(s).
8. **Violation of Residence Hall Policies**: Violation of residence hall contracts, except when the residence hall contract specifically provides for an alternate procedure or remedy for the violation concerned.
9. **Violation of Student Activity Regulations**: Violation of a campus-specific or system-wide regulation, policy, standard of conduct, or code of ethics applicable to the activity in which the student is engaged, and which has been adopted, published or otherwise made known to students participating in such activity.

C. **Health & Safety Violations**

1. **Creating a Dangerous Condition**: Creation of a fire hazard or other dangerous condition.
2. **Endangering Health or Safety**: Conduct which threatens or endangers the health or safety of any individual.
3. **False Reporting of Dangerous Conditions**: Giving or causing to be given false reports of fire or other dangerous conditions.
4. **Illegal Possession, Use, or Sale of Drugs**: Illegal possession, use, or sale of drugs or drug paraphernalia. The misuse of legal prescription drugs.
5. **Interference with Safety Equipment or Alarms**: Tampering with, disabling, or causing malfunction of fire and safety equipment or alarm systems.
6. **Possession or Misuse of Weapons**: Violation of regulations concerning possession or misuse of firearms or other dangerous weapons, as defined by policies established for each campus.
7. **Restricting Traffic Flow**: Restriction of normal traffic flow into or out of University Property.
8. **Use or Possession of Chemicals or Explosives**: Unauthorized use or possession of explosive components, chemicals, etc., such as fireworks, explosives, gas or compressed air.
9. **Violation of Alcohol Policies**: Violations of University or the State of Maine alcoholic beverage regulations or laws.
10. **Violation of Health or Safety Policies**: Violation of University health or safety regulations.

D. **Offenses Involving Other People**

1. **Causing Fear of Physical Harm**: Intentionally or recklessly placing a person or persons in reasonable fear of imminent

physical harm.

2. **Dating Violence:** Violence committed against a person by an individual who is or has been in a social relationship of a romantic or intimate nature with that person. Whether a dating relationship exists is determined based on the reporting party's statement and with consideration of the length of the relationship, the type of relationship, and the frequency of interaction between the persons involved in the relationship. Dating violence includes, but is not limited to, sexual or physical abuse or the threat of such abuse. Dating violence does not include acts covered under the definition of domestic violence. All forms of dating violence prohibited by Maine law are also included.
3. **Domestic Violence:** A felony or misdemeanor crime of violence committed by:
   a. A current or former spouse or intimate partner of the victim;
   b. A person with whom the victim shares a child in common;
   c. A person who is cohabitating with, or has cohabitated with, the victim as a spouse or intimate partner;
   d. A person similarly situated to a spouse of the victim under the domestic or family violence laws of the jurisdiction in which the crime of violence occurred, or
   e. By any other person against an adult or youth victim who is protected from that person's acts under the domestic or family violence laws of the jurisdiction in which the crime of violence occurred.

   All forms of domestic violence prohibited by Maine law are also included.
4. **Gender Discrimination**: Discriminating against an individual on the basis of that individual's gender, including, but not limited to, Dating Violence, Domestic Violence, Sexual Assault, Sexual Harassment, or Stalking.
5. **Harassment:** Repeated and/or severe acts of unwelcome behavior that creates a hostile working, educational, or living environment that unreasonably interferes with an individual's academic or job performance and opportunities.
6. **Hazing:** Any action taken or situation created by a person or an organization, or with the knowledge or Consent of an organization, which recklessly or intentionally endangers the mental or physical health of a student.
7. **Interference with Residential Life**: Significant interference with the normal residential life of others.
8. **Intimidation:** Implied or actual threats or acts that cause a reasonable fear of harm in another, and may be inferred from conduct, words, or circumstances reasonably calculated to cause fear.
9. **Invasion of Privacy:** The violation of another individual's reasonable expectation of privacy where the circumstances justify that expectation, including, but not limited to, physically trespassing in a private area with the intent of observing or eavesdropping, using an electronic device to intercept, record, amplify or broadcast a private conversation or private events, or engaging in surveillance, photographing, broadcasting, image- capturing or recording of private conversations or private events.

   The fact that the Responding Party was a party to the conversation or event is not determinative of another individual's reasonable expectation of privacy.
10. **Lewd or Indecent Behavior:** Exhibition of the genitals, anus, or pubic area of a person other than for legitimate academic purposes.
11. **Physical Assault**: Intentionally, knowingly, or recklessly causing bodily injury or offensive physical contact to another person.
12. **Retaliation:** Action taken by the University or any individual or group against any person for opposing any practices prohibited by the Code or for filing a complaint, testifying, assisting, or participating in an investigation or proceeding under the Code.

    This includes action taken against a bystander who intervened to stop or attempt to stop a violation of the Code. Retaliation includes intimidating, threatening, coercing, or in any way discriminating against an individual because of the individual's complaint or participation.

    Action is generally deemed retaliatory if it would deter a Reasonable Person in the same circumstances from opposing practices prohibited by the Code or from participating in the resolution of a complaint.

13. **Sexual Assault**: An offense that meets the definition of rape, fondling, incest, or statutory rape, as follows:
    a. Rape is the penetration, no matter how slight, of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without the Consent of the victim.
    b. Fondling is the touching of the private body parts of another person for the purpose of sexual gratification, without the Consent of the victim, including instances where the victim is incapable of giving Consent because of his/her age or because of his/her temporary or permanent mental incapacity.
    c. Incest is sexual intercourse between persons who are related to each other within the degrees wherein marriage is

prohibited by law.

d. Statutory rape is sexual intercourse with a person who is under the statutory age of Consent under applicable law.

All forms of sexual assault and sexual contact prohibited by Maine law are also included.

14. **Sexual Harassment:** Includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature, including sexual assault and sexual violence. Sexual harassment, including Sexual Assault, can involve persons of the same or opposite sex.

    Consistent with the law, this policy prohibits two types of sexual harassment:

    a. Tangible Employment or Educational Action (quid pro quo): This type of sexual harassment occurs when the terms or conditions of employment, educational benefits, academic grades or opportunities, living environment or participation in a University activity are made an explicit or implicit condition of submission to or rejection of unwelcome sexual advances or requests for sexual favors, or such submission or rejection is a factor in decisions affecting an individual's employment, education, living environment, or participation in a University program or activity. Generally, a person who engages in this type of sexual harassment is an agent or employee with some authority conferred by the University.

    b. Hostile Environment: Sexual harassment that creates a hostile environment is based on sex and exists when the harassment:
        i. Is severe, pervasive, or persistent, and objectively offensive such that it denies or limits a person's ability to participate in or benefit from the University's programs, services, opportunities, or activities; or
        ii. Unreasonably interferes with an individual's academic or work performance.

    A hostile environment can be created by anyone involved in a University program or activity, such as an administrator, faculty or staff member, student, or campus guest. Offensiveness alone is not enough to create a hostile environment. Although repeated incidents increase the likelihood that a hostile environment has been created, a single serious incident, such as a Sexual Assault, can be sufficient.

    Determining whether conduct creates a hostile environment depends not only on whether the conduct was unwelcome to the person who feels harassed, but also whether a Reasonable Person in a similar situation would have perceived the conduct as objectively offensive.

    The following factors will also be considered:
        i. The degree to which the conduct affected one or more students' education or individual's employment;
        ii. The nature, scope, frequency, duration, and location of the incident(s);
        iii. The identity, number, and relationships of persons involved; and
        iv. The nature of higher education.

15. **Sexual Misconduct:** Includes, but is not limited to, prostituting another person, nonconsensual image capturing of sexual activity, presentation or unauthorized viewing of a non-consensual videotaping of sexual activity, letting others watch you have sex without the knowledge and Consent of your sexual partner, possession of child pornography, peeping tommery, and/or knowingly transmitting an STD or HIV to another person.

    Sexual misconduct may also constitute sexual harassment.

    All forms of sexual misconduct prohibited by Maine law are also included.

16. **Stalking:** Engaging in a course of conduct directed at a specific person that would cause a Reasonable Person to:
    a. Fear for the person's safety or the safety of others; or
    b. Suffer substantial emotional distress.

    For the purposes of this definition:

    a. Course of conduct means two or more acts, including, but not limited to, acts in which the stalker directly, indirectly, or through third parties, by any action, method, device, or means, follows, monitors, observes, surveils, threatens, or communicates to or about a person, or interferes with a person's property.

b. Reasonable person means a reasonable person under similar circumstances and with similar identities to the victim.
c. Substantial emotional distress means significant mental suffering or anguish that may, but does not necessarily, require medical or other professional treatment or counseling.

All forms of stalking prohibited by Maine law are also included.

17. **Discriminatory Harassment**: Harassment based on actual or perceived race, color, religion, sex, Sexual Orientation, Gender Identity, Gender Expression, national origin or citizenship status, age, disability, genetic information or veteran status.
18. **Unauthorized Recording of a Conversation**: Intercepting, recording or image-capturing a University Employee in a classroom, office or over the telephone without that University Employee's Consent unless it is part of an approved reasonable accommodation.

E. **Offenses Involving Property**
1. **Defacement, Destruction, or Misuse of Property**: Intentional and/or reckless misuse, destruction, or defacement of University Property or of the property of other people without authorization.
2. **Misuse of University Computers**: Misuse of the University computer network or computers including, but not limited to, theft of computer files or data, e-mail, or other electronically stored information, probing or hacking into other computers or computer systems, spamming, sending out computer viruses, or uploading or downloading copyrighted material for personal use or distribution without authorization.
3. **Motor Vehicle Violation**: Violation of motor vehicle policies established for each campus.
4. **Tampering, Destruction, or Falsification of Records**: Tampering with, destroying, or falsifying official records.
5. **Theft or Unauthorized Use**: Theft, attempted theft, or unauthorized acquisition, removal, or use of the property of another.
6. **Trespassing**: Trespassing or unauthorized presence on any University Property, including residence halls.

F. **General Infractions**
1. **Aiding Infraction**: Knowingly assisting in the violation of any of the provisions of the Code.
2. **Continued Infraction**: Continued infractions of the Code.
3. **Conviction of a Crime**: Conviction of any crime that threatens: (a) any educational process or legitimate function of the University, or (b) the health or safety of any individual.
4. **Other Illegal Activity**: Violating local, state, or federal laws otherwise not covered under the Code.

IV. SANCTIONS

If a Responding Party admits to a violation of the Code to the Officer, Investigator, Committee or Review Panel; or upon determination by the Officer, Committee or Review Panel that a Responding Party has been found in violation of the Code, one or more of the following sanctions may be imposed in accordance with the provisions of the Code (see Section V):

A. **Assigned Educational Projects:** This may include research projects, reflective essays, counseling assessments, sanction seminars or other related assignments intended to promote learning.
B. **Community Service**: The type of service may be related to the nature of the violation.
C. **Deferred Sanction**: A specific period of time during which a sanction has been imposed but is stayed. Any further violation of the Code during that time may, at minimum result in the imposition of the deferred sanction, and any new or additional sanctions deemed necessary.
D. **Disciplinary Dismissal:** Permanent separation (subject to the right of review after five years) from the University.
1. Responding Parties who are dismissed will not be permitted to attend any of the University campuses or attend any University functions. After five (5) years from the date of the dismissal, the Responding Party may submit a written request to be readmitted to attend one of the University campuses. For a Responding Party preparing to transfer to a non-University institution who has been dismissed for a Violent Crime or Sexual Assault, a letter will be attached to the student's transcript explaining the dismissal. After five (5) years from the date of the dismissal, the Responding Party may submit a written request to have the letter attached for transfer applications to non-University institutions removed from their transcript.
2. Requests for readmission or removal of the letter attached for transfer applications will be submitted to the Officer of the campus from which the Responding Party was dismissed. The Officer will convene the campus committee designated by the President to review such requests pursuant to the campus written procedures.

E. **Disciplinary Probation**: A specified period of time when any further violation may result in additional sanctions, up to and including dismissal from the University.
F. **Disciplinary Suspension**: Separation from the University for a specific period of time and/or until a stated condition(s) is met.

Responding Parties who are suspended will not be permitted to attend any of the University campuses during the sanction period or attend any University functions. After the sanction period has been completed and all requirements of the suspension have been met, the Responding Party is eligible for readmission to any University campus. For a Responding Party preparing to transfer to a non-University institution who has been suspended for a Violent Crime or Sexual Assault, a letter will be attached to his/her transcript explaining that he/she has been suspended. If the Responding Party is transferring to a non-University institution after the sanction has been completed the letter will not be attached to the transcript.

G. **Fine**: Payment of money. Responding Parties who are unable to pay may discuss alternate payment arrangements.
H. **Loss of Contact with a Specific Person(s)**: With this sanction, the person may not initiate direct or indirect contact with a specified person(s).
I. **Loss of Visitation Privileges**: This loss of visitation may be to any designated area(s) of any University Property.
J. **Official Warning:** Official acknowledgment of a violation and the expectation that it will not be repeated.
K. **Removal from University Housing**: Removal from a particular hall or all housing.
L. **Restitution**: Restitution, up to the replacement value of the items damaged, stolen, removed, or used without authority and damages incurred.
M. **Such other action(s) as the Committee, Officer or Review Panel may reasonably deem appropriate (e.g., suspension of an organization's official campus recognition, suspension of a student from an extracurricular activity, termination from student employment, and/or academic degree revocation).**

The University may impose a more severe sanction on a Responding Party when the Officer, Committee, or Review Panel determines that a Responding Party intentionally selected the person or organization against whom the violation was committed, or selected the property damaged or stolen, because of the race, religion, color, sex, Sexual Orientation, Gender Identity, Gender Expression, national origin or citizenship status, age, disability, genetic information or veteran status of that person, or the persons in the organization or the owner of the property.

V. PROCEDURES

Each University campus may adopt procedures for carrying out the provisions of the Code within the guidelines set forth by the Code as described below and consistent with the Code. University campuses having a professional code of ethics may adopt additional procedural provisions to be applicable to their own students.

ADMINISTRATION AND INTERPRETATION OF THE CODE WILL BE SOLELY WITHIN THE JURISDICTION OF THE OFFICER, THE COMMITTEE OR THE REVIEW PANEL, SUCH INTERPRETATION BEING PURSUANT TO THE PROCEDURES OF THE CODE.

A. **PRELIMINARY INQUIRY**
   1. Alleged violations of the Code brought to the attention of the University by University Employees, students, or members of the general public will result in the initiation of a Preliminary Inquiry. A Preliminary Inquiry will determine if there is sufficient information to warrant a Formal Investigation or informal resolution. **Before interviewing or questioning of the Parties, notification must be provided under Section V.C., Notice of Formal Investigation, unless doing so would be likely to jeopardize health or safety, or the integrity of the investigation, or lead to the destruction of evidence.**
   2. Informal resolution may be used to resolve cases where:
      a. There is sufficient information to support the allegations;
      b. All parties have mutually consented to the process; and
      c. The process is acceptable to the Officer.

      The Parties have the right to end the informal process at any time and begin the formal complaint process. Mediation may not be used in cases of allegations of Sexual Assault.

   3. Upon the conclusion of the Preliminary Inquiry, in accordance with Notification Standards, if the alleged violation is

Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Parties will be simultaneously notified whether no charges will be filed, a Formal Investigation will commence, or Informal Resolution will be pursued. In all other cases, only the Responding Party will be notified whether or not charges will be filed, or if a Formal Investigation will commence.

4. If, during the Preliminary Inquiry or at any point during the Formal Investigation, the Officer determines that there is no reasonable cause to conclude that the Code has been violated, the disciplinary process will end and the Responding Party will be notified. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Parties will receive simultaneous notification of the Officer's decision end the disciplinary process and both the Parties will be notified of the right of review.
5. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, once the need for a Formal Investigation has been determined, the Parties will be provided written notification of the Formal Investigation at the appropriate time during the Formal Investigation.
6. Each Officer, Committee member, and Review Panelist is expected to conduct due diligence to determine if there is a potential conflict-of-interest. If there is a conflict of interest for the Officer, the Officer will refer the matter to another Officer. If any member of the Committee or Review panel is conflicted, an alternate will be appointed. The parties have the right to raise any potential conflict-of-interest with the Officer or any member of the Committee or Review Panel.

The University aims to complete the investigation, including the Preliminary Inquiry and Formal Investigation, if any, within a sixty (60) business day time period from the date of initial notice to completion of the Formal Investigation, if any, which time period may be extended as necessary for appropriate cause.

B. **INTERIM MEASURES OR ACTIONS**

1. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the University may provide Interim Measures or Actions intended to address the short-term effects of the alleged Harassment, discrimination, and/or Retaliation, to the Parties and the community, and to prevent further violations of the Code. Interim Measures or Actions taken will be kept as private as reasonably practicable.
2. A Responding Party may be suspended from the University or have privileges revoked pending the outcome of a disciplinary proceeding if, in the judgment of the Officer, the Responding Party's continued presence or use of privileges at the University pending the outcome of the proceeding is likely to pose a substantial threat to the Reporting Party or to other people and/or is likely to cause significant property damage and/or disruption of or interference with the normal operations of the University. The Officer may converse with the Parties when such Interim Measures and Actions are considered.
3. Responding Parties who have been issued an Interim Measures or Actions or an interim suspension may seek review of that decision by requesting the Campus President or designee to review the decision. The Campus President or designee will review the request within five (5) business days of receipt.
4. In accordance with Notification Standards, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking the Officer may inform the Parties of any Interim Measures or Actions.
5. Interim Measures or Actions, including but not limited to: interim suspensions; no-contact orders; University Property usage restrictions; University account holds; and academic degree holds, will be implemented to ensure as minimal negative impact on the Parties while maintaining the safety of the University community and integrity of the investigation.
6. An enrolled student may not graduate if that student has a pending conduct case. If a student officially withdraws from the University or does not participate in the disciplinary process, the process will continue and the student may not be permitted to return to the University or graduate until the student is found not responsible for a violation of the Code or any imposed sanctions have been satisfied.

C. **NOTICE OF FORMAL INVESTIGATION**

1. Prior to commencement of a Formal Investigation, the Officer will notify the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) in writing per the Notification Standards of the following:
   a. Alleged Code violation(s);
   b. Reporting Party(ies);
   c. Date(s) of alleged occurrence(s);
   d. Maximum possible sanctions which may be imposed;

e. The procedures that will be used to resolve the complaint; and
f. Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) right of review.

D. **FORMAL INVESTIGATION**

1. Upon the Officer's decision to commence a Formal Investigation, the Officer will initiate the investigation or assign it to a trained investigator, as soon as practicable.
2. The University may undertake a short delay in its investigation when criminal charges on the basis of the same behaviors that invoked this process are being investigated. The University will promptly resume its investigation and resolution processes once notified by law enforcement that the initial evidence collection is complete.
3. All investigations will be thorough, reliable, impartial, prompt and fair. Investigations entail interviews with all relevant parties and witnesses, obtaining available evidence, and identifying sources of expert information, as necessary.
4. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, both the Parties will be given access to the relevant evidence to be used in rendering a determination and each party will be provided a full and fair opportunity to address that evidence prior to a finding being rendered.
5. The Officer and/or investigator will provide regular updates to the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) throughout the investigation, as appropriate.
6. During the Investigation the Parties may be accompanied by an Advisor.
7. If no charges are being brought at the conclusion of the Formal Investigation, the Officer will provide such notification to the Responding Party. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Parties will receive simultaneous notification of the Officer's decision not to bring charges and both the Parties will be notified of the right of review to either a committee chair or alternative hearing officer.

E. **NOTICE OF ADMINISTRATIVE HEARING BEFORE THE OFFICER**

1. If charges are being filed, the Officer will notify the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) in writing per the Notification Standards of the following:
   a. Charge(s);
   b. Reporting Party(ies);
   c. Date(s) of alleged occurrence(s);
   d. Maximum possible sanction which may be imposed;
   e. The procedures that will be used to resolve the complaint; and
   f. Date and time of the Administrative Hearing.

F. **ADMINISTRATIVE HEARING BEFORE THE OFFICER**

An Administrative Hearing before the Officer will be held for cases that have not been disposed of informally where there is sufficient evidence to charge a Code violation.

1. If any Party is not present at the time appointed for the hearing, the Officer will first attempt to determine the reason for that person's absence. The Officer may then proceed in a normal manner without a Party's attendance, may hear only a portion of the testimony and adjourn to a later date, or may continue the entire hearing to a later date.
   a. The Officer may not consider the absence of any Party as relevant to whether the Responding Party committed the alleged violation of the Code.
2. During the hearing the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Reporting Party), may be accompanied by an Advisor and a support person of their choice. Advisors and support people will not be permitted to speak at the hearing, except to speak with their advisee, unless permission has otherwise been granted by the Officer.
3. During the hearing, the Officer may hear and consider as evidence any relevant information.

   The Officer may not consider:
   a. Information obtained directly or indirectly through a search of a Party's or witnesses', effects, or room if a court of law has determined the search was illegal.

b. If the Officer is aware that a criminal prosecution relating to the same violation(s) is being conducted, or such action appears likely to be made, independent of the hearing, the Officer will notify the Responding Party in advance of the right to remain silent, and the Officer will draw no negative inference from the Responding Party's refusal to give information or consent to a search, except that the Responding Party had no answer or evidence to give.

4. The Officer will then:
   a. Make a determination that the Responding Party is in violation of the Code if a Preponderance of the Evidence demonstrates that the Responding Party has violated the code, or dismiss the case if the Officer determines the Responding Party is not in violation of the Code. The Officer will inform the Responding Party, in writing, of the outcome, including any sanctions imposed and any right of review.
   b. If the alleged violation is a Dating Violence, Domestic Violence, Sexual Assault, or Stalking, the Parties will receive simultaneous written notification of the outcome, including any sanctions and the rationale for the result and any sanctions, and of the Parties' right of review.
   c. If the alleged violation is Gender Discrimination or Sexual Harassment, the Reporting Party shall receive simultaneous notification of the outcome and of any sanctions that directly relate to the Reporting Party, and of the Reporting Party's right of review.
   d. In a case of a Violent Crime, the University may disclose the final results of the disciplinary proceeding to the victim(s), regardless of whether the University concluded a violation was committed.
5. If the Officer determines the Responding Party is responsible for a violation of the Code, the Officer will impose appropriate sanctions. Sanctions will become operative immediately once notice has been given to the Responding Party.
6. **Sanctions imposed as the result of the Administrative Hearing are implemented immediately unless the Officer stays their implementation in extraordinary circumstances, pending the outcome of a review hearing.** Graduation, study abroad, internships/ externships, etc. do NOT in and of themselves constitute extraordinary circumstances, and students may not be able to participate in those activities during the review period.

G. **RIGHT OF REVIEW BEYOND ADMINISTRATIVE HEARING BEFORE THE OFFICER**

1. In the event the Officer issues a sanction of suspension, dismissal, academic degree revocation, or loss of recognition of campus organizations, the Responding Party may request a review of the finding and/or sanction. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the Parties have the right to a review of any finding(s) or sanction(s).
2. Requests for review will be in writing, state the issue(s) to be reviewed, and provide a detailed rationale for the request. The written request for a review will be submitted to the Officer within seven (7) calendar days after the Party(ies) has received notice of the Administrative Hearing finding(s) and shall not exceed five (5) pages in length.
3. The request for review to the Committee will be limited to the following grounds:
   a. A procedural error or omission occurred that significantly impacted the outcome of the hearing (e.g. substantiated bias, material deviation from established procedures, etc.).
   b. To consider new evidence, unknown or unavailable during the original hearing or investigation, that could substantially impact the original finding or sanction. A summary of this new evidence and its potential impact will be included in the written request for review.
   c. The sanction imposed is significantly disproportionate to the severity of the violation and/or the cumulative record of the Responding Party.
   d. Reconsideration of existing information and whether it supports the Administrative Hearing Before the Officer finding.
4. The Committee will review request(s) for review. The original finding(s) and sanction(s) will stand if the request for review is not timely or is not based on the grounds listed above in Section V.G(3), and such a decision is final.
5. The Committee review may result in: (a) a change to the finding(s); (b) a change in sanction(s), such as a higher sanction, a lower sanction, the same sanction, or no sanction at all being imposed; or (c) remand to Administrative Hearing Before the Officer.

H. **RESPONSIBILITIES OF THE COMMITTEE**

1. As soon as practicable upon receipt of the request for review, the following steps will be taken:
   a. The Committee chair will notify, in writing, the Officer and the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment,

or Stalking) of a date, place, and time for the Committee hearing. Committee hearings are normally held not earlier than five (5) calendar days and not later than fourteen (14) calendar days after issuance of the notification of hearing.

b. List in the notice to the Parties the names of the Committee member(s) conducting the review and witnesses being invited by the Committee.

c. Make arrangements for the keeping of a recorded record of the Committee hearing. In cases of a review to the Review Panel, the Responding Party charged with the violation, his/her Advisor, and authorized Campus Authorities may have access to the record for purpose of review relating to a request for review. No copies will be made except by the University. The record will be kept by the University campus for at least three (3) years after all review rights have been exhausted at which time the record may be destroyed. Records of hearings are deemed to be Student Education Records under the Family Educational Rights and Privacy Act of 1974 (FERPA) and may not be disclosed publicly except as provided in FERPA. No recording in any form, other than the one made by the Committee, is permitted at the Committee hearing. If the alleged violation is Dating Violence, Domestic Violence, Sexual Assault, or Stalking, the Reporting Party and his/her Advisor may have the same access to the recording as the Respondent. If the alleged violation is Gender Discrimination or Sexual Harassment, the Reporting Party and his/her Advisor may have access to the portions of the recording pertaining to the Reporting Party.

2. Composition of the Committee
   a. The Committee will be comprised as described in Section VI.
   b. The Parties or the Officer will have the right to challenge, for cause, any Committee member by submitting to the Committee Chair written notice stating the grounds for the challenge at least two (2) business days prior to the scheduled hearing. Removal of members for cause will be within the authority and at the discretion of the Committee Chair or another member of the Committee if the Chair is unable to exercise that function or is challenged for cause.
3. Hearing Preliminaries
   a. At any proceeding before the Committee, the Parties and witnesses may have the assistance of an Advisor.
   b. The hearing will be closed to the public. The Committee Chair may permit, in addition to the Party's Advisor, one support person for each Party to observe the proceedings. At the discretion of the Committee Chair, the Committee Chair reserves the right to close the hearing.
   c. If any Party or witness is not present at the time appointed for the hearing, the Committee will attempt to determine the reason for that party's absence. The Committee may proceed: (1) in a normal manner without their attendance; (2) hear only a portion of the testimony and adjourn to a later date; or (3) continue the entire hearing to a later date. The Committee may not consider the absence of a party as relevant to whether the Responding Party committed the alleged violation of the Code.
4. Hearing Procedures
   a. Responsibility for recognizing and permitting persons to speak lies exclusively with the Committee Chair.
   b. Persons disruptive at any stage of the hearing may be evicted at the reasonable discretion of the Committee Chair.
   c. The names of witnesses and/or copies of written statements will be submitted to the Officer at least two (2) business days prior to the hearing for inclusion in the materials presented to the Committee. At the discretion of the Committee Chair, the Parties may submit written documents, oral testimony of witnesses, and all relevant documents, records, and exhibits at the time of the hearing.
   d. The Officer will first present the results of the Preliminary Investigation, Formal Investigation, and Administrative Hearing.
   e. The Reporting Party may present oral testimony and/or written statements from any person(s) including the Responding Party, and all relevant documents, records and exhibits.
   f. The Responding Party may then present oral testimony and or written documentation themselves and/or from other witnesses, and all relevant documents, records and exhibits.
   g. At any time during the proceedings, members of the Committee may question witnesses or parties to the proceeding; witnesses or parties may only ask questions of each other at the discretion of and through the Committee Chair. **Questioning by any Advisor is not permitted.** Advisors and support people may not speak at the hearing, except to their advisee.
   h. After the presentation of all the information to the Committee, the Officer and the Responding Party (and the Reporting Party if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) may present summaries of their arguments to the Committee.
   i. During the hearing, the Committee may consider any relevant information to the grounds for appeal, will not be bound by the strict rules of legal evidence, and may take into account any information which is of value in determining the issues involved. Efforts will be made to obtain the most reliable information available.

j. After all parties have presented their respective information, the Committee will go into closed session to determine whether the Responding Party is in violation of the Code. Deliberations are not recorded. A Committee member should vote that the Responding Party is in violation of the Code only if a Preponderance of the Evidence demonstrates behavior that is in violation.

k. A simple majority vote of responsible or not responsible for a violation of the Code by the Committee members present will prevail. If the majority of the Committee votes for not responsible or there is a tie, the Responding Party will be found not responsible.

l. If a Responding Party is found to be responsible for the violation of Code, the Officer and the Responding Party (and the Reporting Party if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) may make recommendations to the Committee as to the appropriate sanctions. The Committee will go back into closed session and deliberate on sanctions. Deliberations are not recorded. A majority vote of the Committee members is needed for an imposition of a sanction(s).

5. After Committee deliberations are concluded, the Committee Chair will:
   a. Inform the Responding Party of the finding of the Committee, per the Notification Standards including:
      i. The section(s) of the Code found to have been violated;
      ii. The sanction imposed; and
      iii. The rationale for both the finding(s) and the sanction(s).
   b. If the alleged violation is a Dating Violence, Domestic Violence, Sexual Assault, or Stalking, the Committee will inform the Parties, per the Notification Standards, simultaneously of the outcome of the proceeding, the rationale for the result, any sanctions, when a decision is considered final, any changes that occur prior to finalization, and any rights of review.
   c. If the alleged violation is Gender Discrimination or Sexual Harassment in addition to informing the Complainant of the outcome of the proceedings the Committee shall inform the Complainant of any sanctions imposed upon the Respondent that directly relate to the Complainant.
   d. In a case of a Violent Crime, the University may disclose the final results of the Committee Hearing to the victim, regardless of whether the University concluded there was a violation of the Code.
6. **Sanctions imposed as the result of the Committee hearing are implemented immediately unless the Chair of the Committee stays their implementation in extraordinary circumstances, pending the outcome of a review hearing.** Graduation, study abroad, internships/ externships, etc. do NOT in and of themselves constitute extraordinary circumstances, and students may not be able to participate in those activities during the review period.

I. **RIGHT OF REVIEW BEYOND COMMITTEE**

1. In the event the Committee approves a sanction of suspension, dismissal, academic degree revocation, or loss of recognition of campus organizations, the Responding Party may request a review of the finding or sanction. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, all Parties have the right to a review of any finding(s) or sanction(s).
2. Requests for review will be in writing, state the issue(s) to be reviewed, and provide a detailed rationale for the request. The written request for a review will be submitted to the Officer within seven (7) calendar days after the Party(ies) has received notice of the Committee finding(s) and shall not exceed five (5) pages in length.
3. If the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking, the review request will be shared with the other Party(ies), who may file a response within five (5) calendar days and/or bring their own review on separate grounds within the original timeframe. If new grounds are raised, the party requesting the review will be permitted to submit a written response to these new grounds within five (5) calendar days. This response will be shared with all Parties.
4. Campus president or designee, will appoint a Review Panel as described in Section VII below.
5. The request for review to the Review Panel will be limited to the following grounds:
   a. A procedural error or omission occurred that significantly impacted the outcome of the process (e.g. substantiated bias, material deviation from established procedures, etc.).
   b. To consider new evidence, unknown or unavailable during the original hearing or investigation, that could substantially impact the original finding or sanction. A summary of this new evidence and its potential impact will be included.
   c. The sanction imposed is significantly disproportionate to the severity of the violation and the cumulative record of the Responding Party.
6. The Review Panel will review request(s) for review. The original finding(s) and sanction(s) will stand if the request for review is not timely or is not based on the grounds listed above in Section V.H(5), and such a decision is final.

7. If the Review Panel finds that at least one of the review grounds is met by at least one party, additional principles governing the hearing of review will include the following:
    a. The Review Panel may make changes to the finding only where there is clear error and to the sanction(s) only if there is a compelling justification to do so.
    b. A review hearing is not intended to be a full re-hearing (de novo) of the allegation(s). A review to the Review Panel is limited to a review of the written documentation and recorded record of the Committee hearing regarding the grounds for review, and any new information provided by Parties. A review is not an opportunity for the Review Panel to substitute their judgment for that of the Committee merely because it disagrees with the Committee finding(s) and/or sanction(s). Reviews may be remanded to the original Committee or Officer at the discretion of the Review Panel. A remand to the original Committee or Officer can not be reviewed.
    c. In accordance with the Notification Standards, the Responding Party (and the Reporting Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) will be informed of whether the grounds for a review are accepted and of the results of the review decision or remand.
    d. A majority vote of the Review Panel will prevail.
    e. Once the Review Panel has made a decision, the outcome is final. Further reviews are not permitted, even if a decision or sanction is changed on remand, except in the case of a new hearing before a new Committee or Officer, if ordered by the Review Panel.
    f. In accordance with the Notification Standards, the Responding Party (and the Responding Party, if the alleged violation is Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking) will be informed in writing of the outcome of the Review Panel.
    g. In a case of a Violent Crime the University may disclose the final results of the Review Panel to the victim, regardless of whether the University concluded a violation was committed.
8. In rare cases where a procedural (or substantive) error cannot be cured by the Review Panel (as in cases of bias), the Review Panel may recommend a new hearing with a new Committee. The results of the new Committee hearing may be reviewed, once, on any of the three (3) applicable grounds for review stated in Section V.H(5) above.
9. In cases where the review results in reinstatement to the University or resumption of privileges, all reasonable attempts will be made to restore the Responding Party to his/her/their/its prior status.

VI. STUDENT CONDUCT COMMITTEE COMPOSITION

A. Committee members will be identified by campus presidents or their designee(s).
B. Each University campus will identify from their respective campus, at least three (3) people, who can serve as trained Committee members, each in the following categories:
    1. Enrolled students;
    2. Faculty members; and
    3. Staff members.
C. Each hearing Committee will have at least three (3) and no more than seven (7) members consisting of:
    1. Committee Chair who is either a faculty or staff member;
    2. At least one (1) enrolled student; and
    3. At least one (1) faculty or staff member.
D. All members of a hearing Committee will avoid both the appearance and reality of any conflict of interest. Any Committee member who has a potential conflict of interest or feels that s/he is unable to render an unbiased decision in the case will decline assignment to that Committee.
E. The composition of the Committee will have equitable gender representation whenever practicable.

VII. REVIEW PANEL COMPOSITION

A. At the discretion of each campus president or designee, the Review Panel shall consist of either:
    1. One (1) person who is a faculty or staff member, as identified by the campus president or designee; or
    2. Three (3) members which shall include:
        a. One (1) faculty or staff member identified by the campus president;
        b. One (1) enrolled student; and
        c. One (1) Committee member.
B. All Review Panel members may not have previous involvement with the current matter. All members of a Review Panel will avoid both the appearance and reality of any conflict of interest. Any Review Panel member who has a potential conflict of interest or feels that s/he is unable to render an unbiased decision in the case will decline assignment to that Review Panel.

VIII. TRAINING

A. The following individuals will have annual training on issues related to Dating Violence, Domestic Violence, Gender Discrimination, Sexual Assault, Sexual Harassment, or Stalking and how to conduct an investigation and hearing process that protects the safety of individuals involved and promotes accountability:
   1. Campus presidents' designee(s);
   2. Officers;
   3. Individuals responsible for conducting Preliminary Inquiry or Formal Investigations;
   4. Committee members; and
   5. Review Panel members.

IX. SPECIFIC PROCEDURES WITH RESPECT TO DATING VIOLENCE, DOMESTIC VIOLENCE, SEXUAL ASSAULT, OR STALKING

The University prohibits Dating Violence, Domestic Violence, Sexual Assault, or Stalking. In such cases, the University will provide a prompt, fair, and impartial investigation and resolution. This process will be conducted by University Employees who receive annual training on these issues, and on how to conduct an investigation and hearing process that protects the safety of individuals involved and promotes accountability.

A. Reporting a Violation
   1. Individuals may elect to report an incident to Campus Authorities, local law enforcement, both, or neither.
   2. Should a Reporting Party elect to report an incident to local law enforcement, Campus Authorities are available to assist with this process at the Reporting Party's request.
   3. Reporting Parties should, if possible, attempt to preserve any evidence. This evidence could prove crucial should the Reporting Party choose to report a violation of the Code, report a criminal act to local law enforcement, or seek an order of protection from abuse or harassment from the courts.
   4. As with other violations of the Code, and in accordance with federal law, the Preponderance of the Evidence standard will be used to determine whether a violation of the Code has occurred.

B. Sanctions and Protective Measures
   1. Separate from the sanctions outlined in Section IV, it is within the University's power to impose remedial measures for the Parties.
   2. Even if a Reporting Party chooses not to pursue disciplinary proceedings under the Code or report the incident to law enforcement, the Reporting Party should consider talking to Title IX Coordinator or the Deputy Coordinator about the possibility of remedial measures, as many measures (such as counseling or changing classes) may be possible regardless of whether an investigation is initiated.
   3. Examples of possible remedial measures include:
      1. Changes in housing, classes, or transportation in order to avoid contact between the Parties;
      2. No-contact directives; and
      3. Helping connect the Parties to access services on campus and in the community, including counseling.
   4. Additional information on resources, including details about free on-campus counseling services and other resources on campus and in the community, may be found in the University's policy pamphlet on sexual assault, domestic violence, dating violence, and stalking.

C. Confidentiality
   1. Under federal law, the University is required to report statistics regarding the occurrence of certain crimes in the University community. When reporting these statistics the University withholds the names of Parties as confidential and, to the extent permissible by law, withholds any other information that may serve to identify the Parties.
   2. If a Reporting Party requests that their name or other identifiable information not be disclosed to the Responding Party, the University's ability to respond to the incident and pursue disciplinary action may be limited. Reporting Parties should note that, under Title IX of the Education Amendments of 1972, retaliation against a Party is prohibited. University Employees will take steps to prevent retaliation and will take responsive action if retaliation is found to have occurred.

X. STUDENT CONDUCT CODE REVIEW BOARD

A. The Student Conduct Code Review Board will be responsible for:
   1. Considering all proposed amendments to the Code and acting as an advisor to the Board of Trustees in matters pertaining to the Code; and
   2. Sending recommendations on proposed amendments of the Code to the President's Council and Chancellor for transmission to the Board of Trustees.

B. The Student Conduct Code Review Board will be composed of the following:
   1. From each campus of the University:
      a. One (1) Officer;
      b. One (1) Committee chair; and
      c. One (1) enrolled student appointed by the President or his/her designee after seeking nominations from student representatives.
   2. One (1) enrolled student who is in a distance education program. This enrolled student will be appointed by the Vice Chancellor for Academic Affairs or his/her designee.
   3. One (1) representative from the Board of Trustees.
   4. One (1) representative appointed by Chancellor.

C. The Chancellor's representative will be responsible for calling the Student Conduct Code Review Board into session.

D. The Student Conduct Code Review Board will meet at least once every three (3) years, but may meet more often when requested by the following:
   1. Officers representing at least two (2) campuses of the University;
   2. Student government officers representing at least two (2) campuses of the University; or
   3. The Chancellor.

XI. AMENDING THE STUDENT CONDUCT CODE

The Board of Trustees will act upon proposed amendments to the Code after receiving recommendations of the Student Conduct Code Review Board, the President's Council of the University System, and the Chancellor. As provisions of the Code are subject to periodic review and change, the most recent and current copy of the Code may be obtained through the University of Maine System Chief Student Affairs Office or the Student Affairs Office on each campus.

Revised by the Student Conduct Code Review Board and accepted by the Board of Trustees, XXXXXXXX/
Effective Date: July 1, 2018

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

1. NAME OF ITEM: Spring 2018 Enrollment Report

2. INITIATED BY: Gregory G. Johnson, Chair

3. BOARD INFORMATION: X **BOARD ACTION:**

4. OUTCOME: **BOARD POLICY:**
Increase Enrollment
Improve Student Success and Completion

5. BACKGROUND:

The Spring 2018 Enrollment Report is historically run after our census date of February 15. Rosa Redonnett, Chief Student Affairs Officer, will briefly update Academic and Student Affairs Committee members on the status of enrollment at our campuses for Spring 2018 based on the findings within the report.

[Note: The Spring Enrollment report will be sent during the week of February 26]

2/23/18

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

University of Maine System

Spring 2018 Enrollment Report

Robert Zuercher, UMS Senior Institutional Research & Planning Analyst
Justin Young, UMS Senior Institutional Research & Planning Analyst
February 22, 2018

Spring 2018 Enrollment Report – The University of Maine System

INTRODUCTION

The following report provides summary information regarding enrollment at the University of Maine System for the 2018 Spring Semester. All data reported is as of the census date, February 15, 2018.

Notes:

1. Some totals may not appear to sum correctly due to rounding (e.g., percentages).
2. USM graduate student figures include the University of Maine School of Law.

Data Source: PeopleSoft Database; the University of Maine System; 2/15/2018.

Spring 2018 Enrollment Report – The University of Maine System

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Spring 2018 Enrollment Report – The University of Maine System

HIGHLIGHTS

- Compared to Spring 2017, student credit hours saw an increase at the system level in Spring 2018. Undergraduate credit hours increased by 0.7%, while graduate credit hours increased by 5.1%. Increases in undergraduate student credit hours were largest at UMPI (10.4% higher than last spring), USM (2.6%), and UM (1.4%). Undergraduate credit hours declined compared to last spring at UMA (a drop of 5%), UMF (-1.3%), UMFK (-1.2%), and UMM (-5.0%). All institutions with graduate offerings saw increases in credit hours, ranging from a 36.9% increase at UMF (though such credits make up only 4.3% of their overall credit hours), a 6% increase at USM, and a 1.1% increase at UM.

- Overall Spring student credit hours remain below the levels seen five years ago, despite these one-year increases over last year. At the system level, undergraduate credit hours are 2.3% below their Spring 2014 levels, and graduate credit hours by 1.7%. Spring 2018 undergraduate credit hours are above their 2014 levels at UM (where they are 7.3% higher compared to five years prior) and UMFK (16.3% above, attributable in part to growth in Early College). Relative to Spring 2014, Spring 2018 graduate credit hours saw growth at UM (by 2.7%) and UMF (a 74% increase) and declined at USM by 7.7%.

- As a percentage of undergraduate student credit hours, those attributable to Early College now comprise 2.5% in Spring 2018. One year ago, Early College comprised just 1.8% of all undergraduate credit hours. In Spring of 2014, this figure was just 0.8% (2,104 credit hours, compared to 6,659 credit hours in Spring 2018). Put differently, Early College credit hours at the system level increased 38.9% over last spring, and 216.5% since Spring 2014.

- Changes in headcount as well as credit hours continue to be bifurcated between in-state and out-of-state. At the system level, credit hours among in-state students declined 2.2% since last spring and by 11.2% since Spring 2014. Among out-of-state students (who account for one fifth of all credit hours), student credit hours increased 16.5% since last spring and have grown by 52.4% in the past five years. Although credit hours attributable to NEBHE students fell by 2.8% over last spring, there is also five-year overall growth in the credit hours of NEBHE students (a 9.9% increase since Spring 2014).

- Women continue to comprise a larger share of the student population compared to men. At the graduate level, the headcount of women students increased by 4.9% over last spring (compared to an increase of 0.9% among men graduate students over a year ago). Compared to five years ago, the headcount of men graduate students has dropped by 7.6% but increased by 6.0% among women. The growth of women among graduate students mirror national enrollment trends.

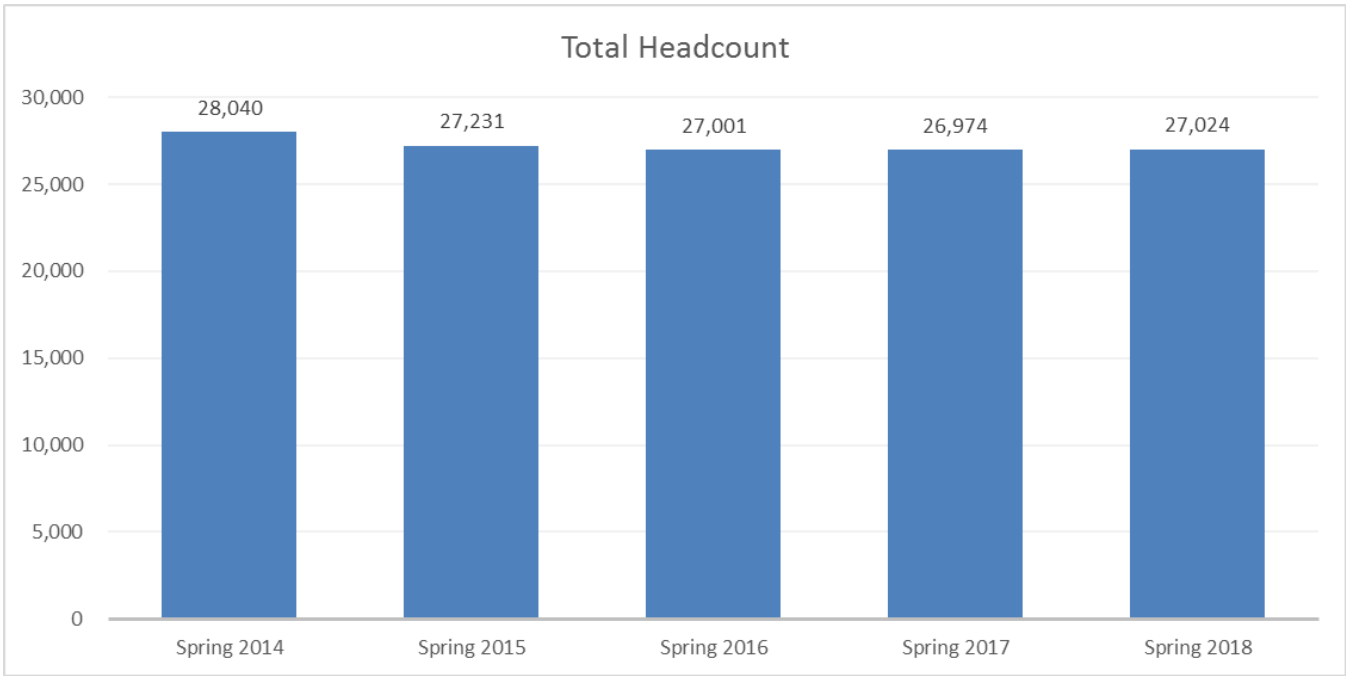
- Over the past five years, enrollment among White students declined by 3.6%, and enrollments among American Indian/Alaskan Native dropped by 24.2%. At the same time, enrollments among Black/African American students increased by more than a third (34.4%) compared to five years ago, and by 11% among Asian students. Enrollments among Hispanic students increased by 48.7% since Spring 2014, and those who identified as two or more races saw an increase in enrollment 32.6% higher compared to five years ago.

- Distance Online credit hours continue to increase; over the past five Spring terms, they have increased by 27.6%. In Spring 2018, Distance Online credit hours comprised 91.4% of all Distance Education credit hours and 21.7% of all credit hours.

Spring 2018 Enrollment Report – The University of Maine System

Headcount by Institution and Student Level

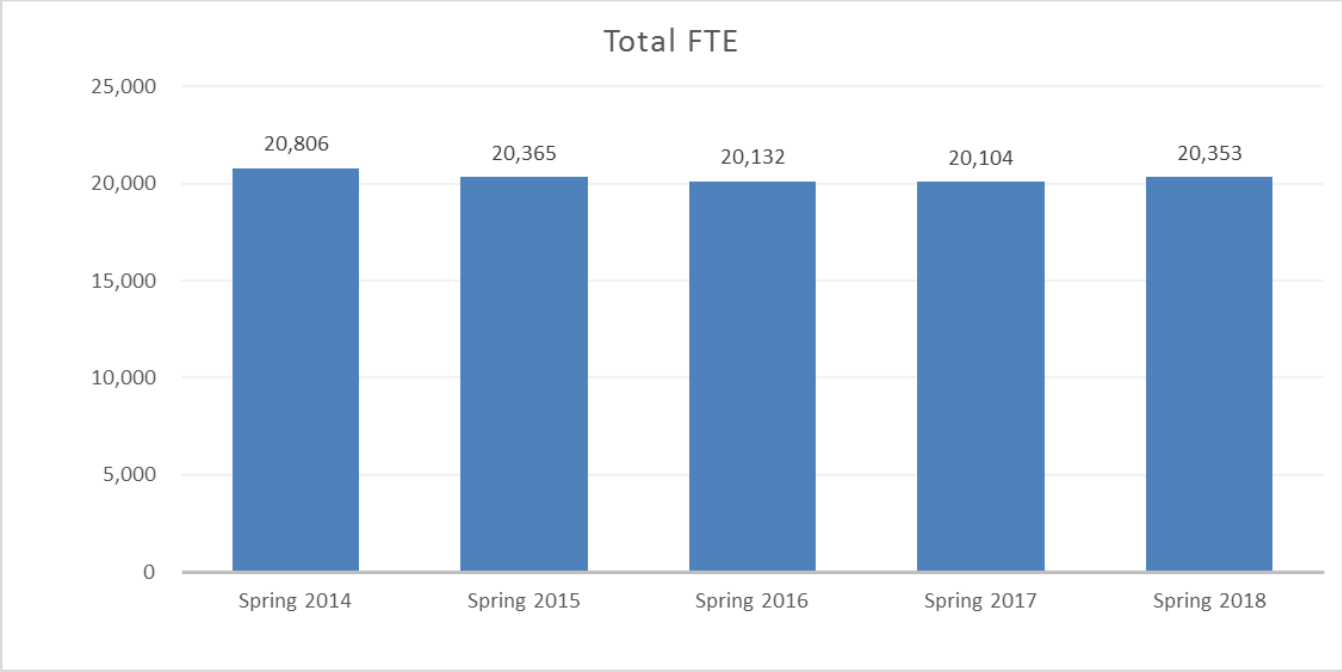
		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	Undergraduate	8,538	8,654	8,648	8,623	8,696	82.5%	0.8%	1.9%	
	Graduate	1,763	1,678	1,676	1,851	1,846	17.5%	-0.3%	4.7%	
	Total	**10,301**	**10,332**	**10,324**	**10,474**	**10,542**	**100.0%**	**0.6%**	**2.3%**	
UMA	Undergraduate	4,603	4,426	4,443	4,041	3,820	100.0%	-5.5%	-17.0%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**4,603**	**4,426**	**4,443**	**4,041**	**3,820**	**100.0%**	**-5.5%**	**-17.0%**	
UMF	Undergraduate	1,789	1,672	1,674	1,662	1,633	88.3%	-1.7%	-8.7%	
	Graduate	186	194	222	233	327	11.7%	40.3%	75.8%	
	Total	**1,975**	**1,866**	**1,896**	**1,895**	**1,960**	**100.0%**	**3.4%**	**-0.8%**	
UMFK	Undergraduate	1,058	1,240	1,402	1,494	1,482	100.0%	-0.8%	40.1%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**1,058**	**1,240**	**1,402**	**1,494**	**1,482**	**100.0%**	**-0.8%**	**40.1%**	
UMM	Undergraduate	800	779	715	716	675	100.0%	-5.7%	-15.6%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**800**	**779**	**715**	**716**	**675**	**100.0%**	**-5.7%**	**-15.6%**	
UMPI	Undergraduate	1,186	1,049	1,078	1,148	1,282	100.0%	11.7%	8.1%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**1,186**	**1,049**	**1,078**	**1,148**	**1,282**	**100.0%**	**11.7%**	**8.1%**	
USM	Undergraduate	6,244	5,776	5,511	5,552	5,562	77.2%	0.2%	-10.9%	
	Graduate	1,873	1,763	1,632	1,654	1,701	22.8%	2.8%	-9.2%	
	Total	**8,117**	**7,539**	**7,143**	**7,206**	**7,263**	**100.0%**	**0.8%**	**-10.5%**	
Total	**Undergraduate**	**24,218**	**23,596**	**23,471**	**23,236**	**23,150**	**85.7%**	**-0.4%**	**-4.4%**	
	Graduate	**3,822**	**3,635**	**3,530**	**3,738**	**3,874**	**14.3%**	**3.6%**	**1.4%**	
	Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***0.2%***	***-3.6%***	



Spring 2018 Enrollment Report – The University of Maine System

FTE by Institution and Student Level

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	Undergraduate	7,563	7,704	7,837	8,001	8,112	88.8%	1.4%	7.3%	
	Graduate	992	994	979	1,007	1,019	11.2%	1.2%	2.7%	
	Total	**8,555**	**8,699**	**8,817**	**9,008**	**9,131**	**100.0%**	**1.4%**	**6.7%**	
UMA	Undergraduate	2,592	2,481	2,463	2,167	2,059	100.0%	-5.0%	-20.5%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**2,592**	**2,481**	**2,463**	**2,167**	**2,059**	**100.0%**	**-5.0%**	**-20.5%**	
UMF	Undergraduate	1,633	1,537	1,522	1,522	1,502	92.6%	-1.3%	-8.0%	
	Graduate	69	70	87	88	121	7.4%	37.1%	74.0%	
	Total	**1,702**	**1,607**	**1,609**	**1,611**	**1,623**	**100.0%**	**0.7%**	**-4.7%**	
UMFK	Undergraduate	705	748	818	830	820	100.0%	-1.2%	16.3%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**705**	**748**	**818**	**830**	**820**	**100.0%**	**-1.2%**	**16.3%**	
UMM	Undergraduate	513	497	471	456	433	100.0%	-5.0%	-15.5%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**513**	**497**	**471**	**456**	**433**	**100.0%**	**-5.0%**	**-15.5%**	
UMPI	Undergraduate	801	717	709	722	797	100.0%	10.4%	-0.4%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**801**	**717**	**709**	**722**	**797**	**100.0%**	**10.4%**	**-0.4%**	
USM	Undergraduate	4,505	4,215	3,986	4,062	4,166	75.9%	2.6%	-7.5%	
	Graduate	1,432	1,402	1,260	1,249	1,323	24.1%	5.9%	-7.6%	
	Total	**5,937**	**5,617**	**5,246**	**5,311**	**5,489**	**100.0%**	**3.3%**	**-7.6%**	
Total	**Undergraduate**	**18,312**	**17,899**	**17,806**	**17,760**	**17,890**	**87.9%**	**0.7%**	**-2.3%**	
	Graduate	**2,494**	**2,466**	**2,326**	**2,344**	**2,463**	**12.1%**	**5.1%**	**-1.2%**	
	Total	***20,806***	***20,365***	***20,132***	***20,104***	**20,353**	***100.0%***	***1.2%***	***-2.2%***	

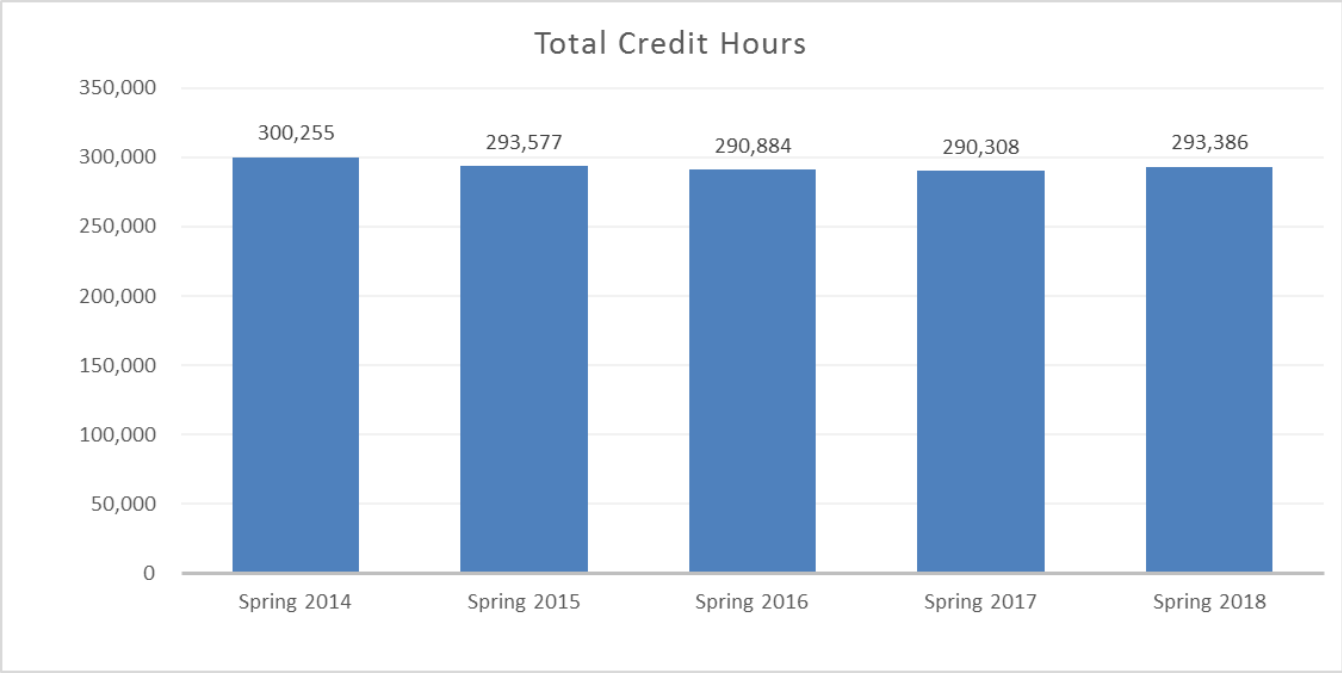


Note: The formula for calculating Fall FTE (for all institutions except UMF starting in Fall 2006) is as follows:
Fall Undergraduate Credit Hours/15 + Fall Professional (Law) Credit Hours/15 + Fall Graduate Credit Hours/9 = Fall FTE +
UMF: Fall Undergraduate Credit Hours/16 + Fall Graduate Credit Hours/9 = Fall FTE

Spring 2018 Enrollment Report – The University of Maine System

Credit Hours by Institution and Student Level

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	Undergraduate	113,446	115,562	117,561	120,010	121,684	93.0%	1.4%	7.3%	
	Graduate	8,931	8,950	8,814	9,066	9,170	7.0%	1.1%	2.7%	
	Total	**122,377**	**124,511**	**126,374**	**129,076**	**130,854**	**100.0%**	**1.4%**	**6.9%**	
UMA	Undergraduate	38,877	37,211	36,940	32,504	30,888	100.0%	-5.0%	-20.5%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**38,877**	**37,211**	**36,940**	**32,504**	**30,888**	**100.0%**	**-5.0%**	**-20.5%**	
UMF	Undergraduate	26,128	24,590	24,358	24,359	24,031	95.7%	-1.3%	-8.0%	
	Graduate	624	628	781	793	1,086	4.3%	36.9%	74.0%	
	Total	**26,752**	**25,218**	**25,139**	**25,152**	**25,117**	**100.0%**	**-0.1%**	**-6.1%**	
UMFK	Undergraduate	10,578	11,221	12,266	12,450	12,298	100.0%	-1.2%	16.3%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**10,578**	**11,221**	**12,266**	**12,450**	**12,298**	**100.0%**	**-1.2%**	**16.3%**	
UMM	Undergraduate	7,696	7,448	7,059	6,843	6,501	100.0%	-5.0%	-15.5%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**7,696**	**7,448**	**7,059**	**6,843**	**6,501**	**100.0%**	**-5.0%**	**-15.5%**	
UMPI	Undergraduate	12,010	10,761	10,641	10,826	11,957	100.0%	10.4%	-0.4%	
	Graduate	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**12,010**	**10,761**	**10,641**	**10,826**	**11,957**	**100.0%**	**10.4%**	**-0.4%**	
USM	Undergraduate	67,579	63,226	59,792	60,931	62,489	82.5%	2.6%	-7.5%	
	Graduate	14,387	13,981	12,674	12,528	13,283	17.5%	6.0%	-7.7%	
	Total	**81,966**	**77,207**	**72,465**	**73,459**	**75,772**	**100.0%**	**3.1%**	**-7.6%**	
Total	**Undergraduate**	**276,313**	**270,019**	**268,616**	**267,922**	**269,848**	**92.0%**	**0.7%**	**-2.3%**	
	Graduate	**23,942**	**23,558**	**22,268**	**22,386**	**23,539**	**8.0%**	**5.1%**	**-1.7%**	
	Total	***300,255***	***293,577***	***290,884***	**290,308**	**293,386**	***100.0%***	***1.1%***	***-2.3%***	



Spring 2018 Enrollment Report – The University of Maine System

Spring 2018 Early College Students by Institution and Primary Academic Plan

	Primary Academic Plan	Head Count	% Total Underg	FTE	% Total Underg	Credit Hours	% Total Underg
UM	Academ-e	135	1.6%	32.0	0.4%	480	0.4%
	Aspirations	13	0.1%	3.9	0.0%	59	0.0%
	UM Early College Total	**148**	**1.7%**	**35.9**	**0.4%**	**539**	**0.4%**
	UM Undergraduate Total	**8,696**	**100.0%**	**8,112.3**	**100.0%**	**121,684**	**100.0%**
UMA	Aspirations	236	6.2%	59.9	2.9%	899	2.9%
	Bridge-Year	17	0.4%	3.6	0.2%	54	0.2%
	UMA Early College Total	**253**	**6.6%**	**63.5**	**3.1%**	**953**	**3.1%**
	UMA Undergraduate Total	**3,820**	**100.0%**	**2,059.2**	**100.0%**	**30,888**	**100.0%**
UMF	Aspirations	5	0.3%	2.8	0.2%	44	0.2%
	UMF Early College Total	**5**	**0.3%**	**2.8**	**0.2%**	**44**	**0.2%**
	UMF Undergraduate Total	**1,633**	**100.0%**	**1,501.9**	**100.0%**	**24,031**	**100.0%**
UMFK	Aspirations	208	14.0%	63.7	7.8%	955	7.8%
	Dual Enrollment	237	16.0%	53.1	6.5%	797	6.5%
	UMFK Early College Total	**445**	**30.0%**	**116.8**	**14.2%**	**1,752**	**14.2%**
	UMFK Undergraduate Total	**1,482**	**100.0%**	**819.9**	**100.0%**	**12,298**	**100.0%**
UMM	Aspirations	70	10.4%	16.0	3.7%	240	3.7%
	UMM Early College Total	**70**	**10.4%**	**16.0**	**3.7%**	**240**	**3.7%**
	UMM Undergraduate Total	**675**	**100.0%**	**433.4**	**100.0%**	**6,501**	**100.0%**
UMPI	Aspirations	52	4.1%	13.1	1.6%	196	1.6%
	Dual Enrollment	322	25.1%	127.5	16.0%	1,913	16.0%
	UMPI Early College Total	**374**	**29.2%**	**140.6**	**17.6%**	**2,109**	**17.6%**
	UMPI Undergraduate Total	**1,282**	**100.0%**	**797.1**	**100.0%**	**11,957**	**100.0%**
USM	Aspirations	133	2.4%	38.5	0.9%	578	0.9%
	Dual Enrollment	103	1.9%	29.6	0.7%	444	0.7%
	USM Early College Total	**236**	**4.2%**	**68.1**	**1.6%**	**1,022**	**1.6%**
	USM Undergraduate Total	**5,562**	**100.0%**	**4,165.9**	**100.0%**	**62,489**	**100.0%**
Total	**Academ-e**	**135**	**0.6%**	**32.0**	**0.2%**	**480**	**0.2%**
	Aspirations	**717**	**3.1%**	**197.9**	**1.1%**	**2,971**	**1.1%**
	Bridge-Year	**17**	**0.1%**	**3.6**	**0.0%**	**54**	**0.0%**
	Dual Enrollment	**662**	**2.9%**	**210.3**	**1.2%**	**3,154**	**1.2%**
	Total Early College	***1,531***	***6.6%***	***443.7***	***2.5%***	***6,659***	***2.5%***
	Total Undergraduate	***23,150***	***100.0%***	***17,889.7***	***100.0%***	***269,848***	***100.0%***

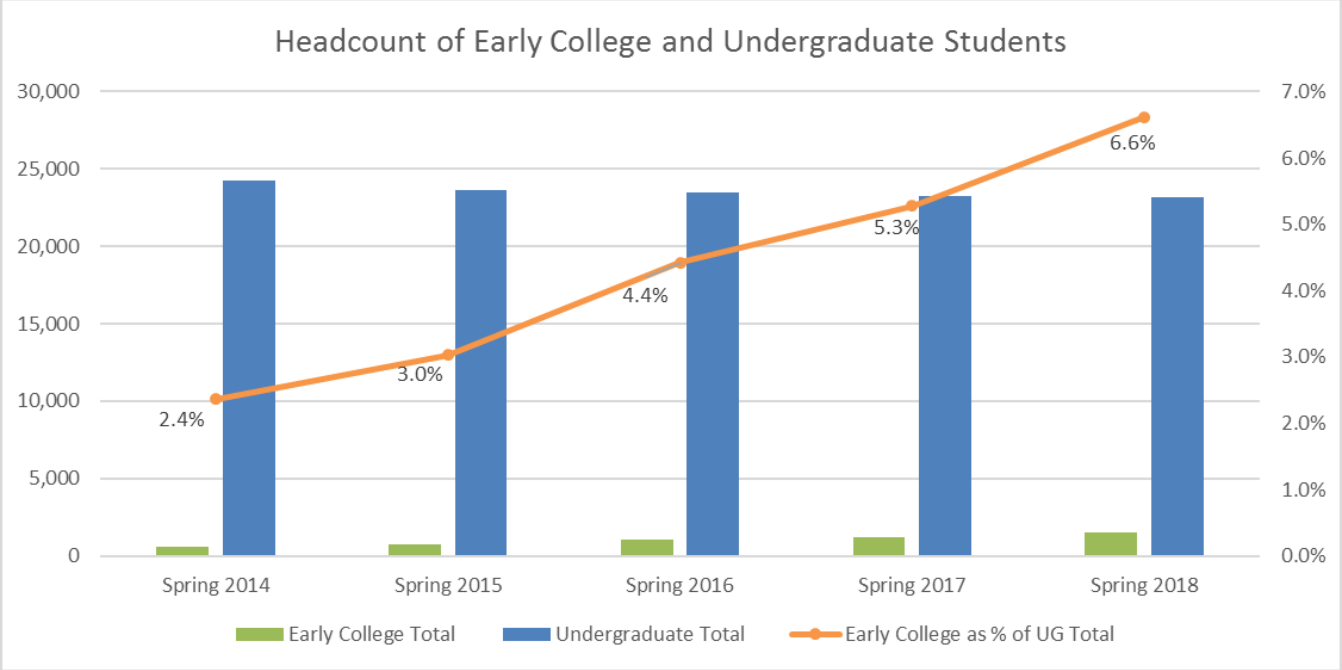
Notes:

1. Early college majors obtained by academic plan.
2. Early college students appearing in both the aspirations and dual enrollment categories count as aspirations for the purpose of this analysis.

Spring 2018 Enrollment Report – The University of Maine System

Headcount of Early College and Undergraduate Students by Institution

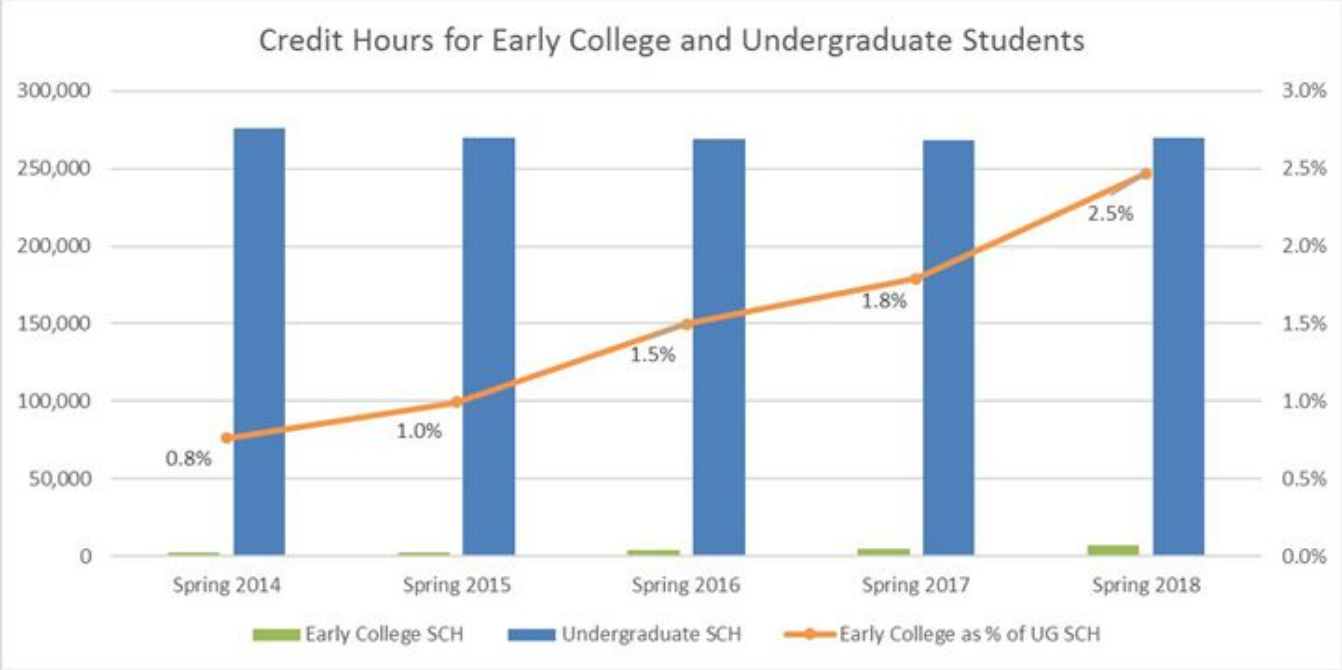
		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% Change 1-year	% Change 5-year
UM	Early College Total	97	146	140	118	148	25.4%	52.6%
	Undergraduate Total	8,538	8,654	8,648	8,623	8,696	0.8%	1.9%
	Early College as % of UG Total	**1.1%**	**1.7%**	**1.6%**	**1.4%**	**1.7%**	**0.3%**	**0.6%**
UMA	Early College Total	85	88	90	153	253	65.4%	197.6%
	Undergraduate Total	4,603	4,426	4,443	4,041	3,820	-5.5%	-17.0%
	Early College as % of UG Total	**1.8%**	**2.0%**	**2.0%**	**3.8%**	**6.6%**	**2.8%**	**4.8%**
UMF	Early College Total	6	3	9	2	5	150.0%	-16.7%
	Undergraduate Total	1,789	1,672	1,674	1,662	1,633	-1.7%	-8.7%
	Early College as % of UG Total	**0.3%**	**0.2%**	**0.5%**	**0.1%**	**0.3%**	**0.2%**	**0.0%**
UMFK	Early College Total	96	197	367	444	445	0.2%	363.5%
	Undergraduate Total	1,058	1,240	1,402	1,494	1,482	-0.8%	40.1%
	Early College as % of UG Total	**9.1%**	**15.9%**	**26.2%**	**29.7%**	**30.0%**	**0.3%**	**21.0%**
UMM	Early College Total	53	53	59	80	70	-12.5%	32.1%
	Undergraduate Total	800	779	715	716	675	-5.7%	-15.6%
	Early College as % of UG Total	**6.6%**	**6.8%**	**8.3%**	**11.2%**	**10.4%**	**-0.8%**	**3.7%**
UMPI	Early College Total	70	49	182	257	374	45.5%	434.3%
	Undergraduate Total	1,186	1,049	1,078	1,148	1,282	11.7%	8.1%
	Early College as % of UG Total	**5.9%**	**4.7%**	**16.9%**	**22.4%**	**29.2%**	**6.8%**	**23.3%**
USM	Early College Total	166	178	191	171	236	38.0%	42.2%
	Undergraduate Total	6,244	5,776	5,511	5,552	5,562	0.2%	-10.9%
	Early College as % of UG Total	**2.7%**	**3.1%**	**3.5%**	**3.1%**	**4.2%**	**1.2%**	**1.6%**
Total	***Early College Total***	***573***	***714***	***1,038***	***1,225***	***1,531***	***25.0%***	***167.2%***
	Undergraduate Total	***24,218***	***23,596***	***23,471***	***23,236***	***23,150***	***-0.4%***	***-4.4%***
	Early College as % of UG Total	***2.4%***	***3.0%***	***4.4%***	***5.3%***	***6.6%***	***1.3%***	***4.2%***



Spring 2018 Enrollment Report – The University of Maine System

Credit Hours for Early College and Undergraduate Students by Institution

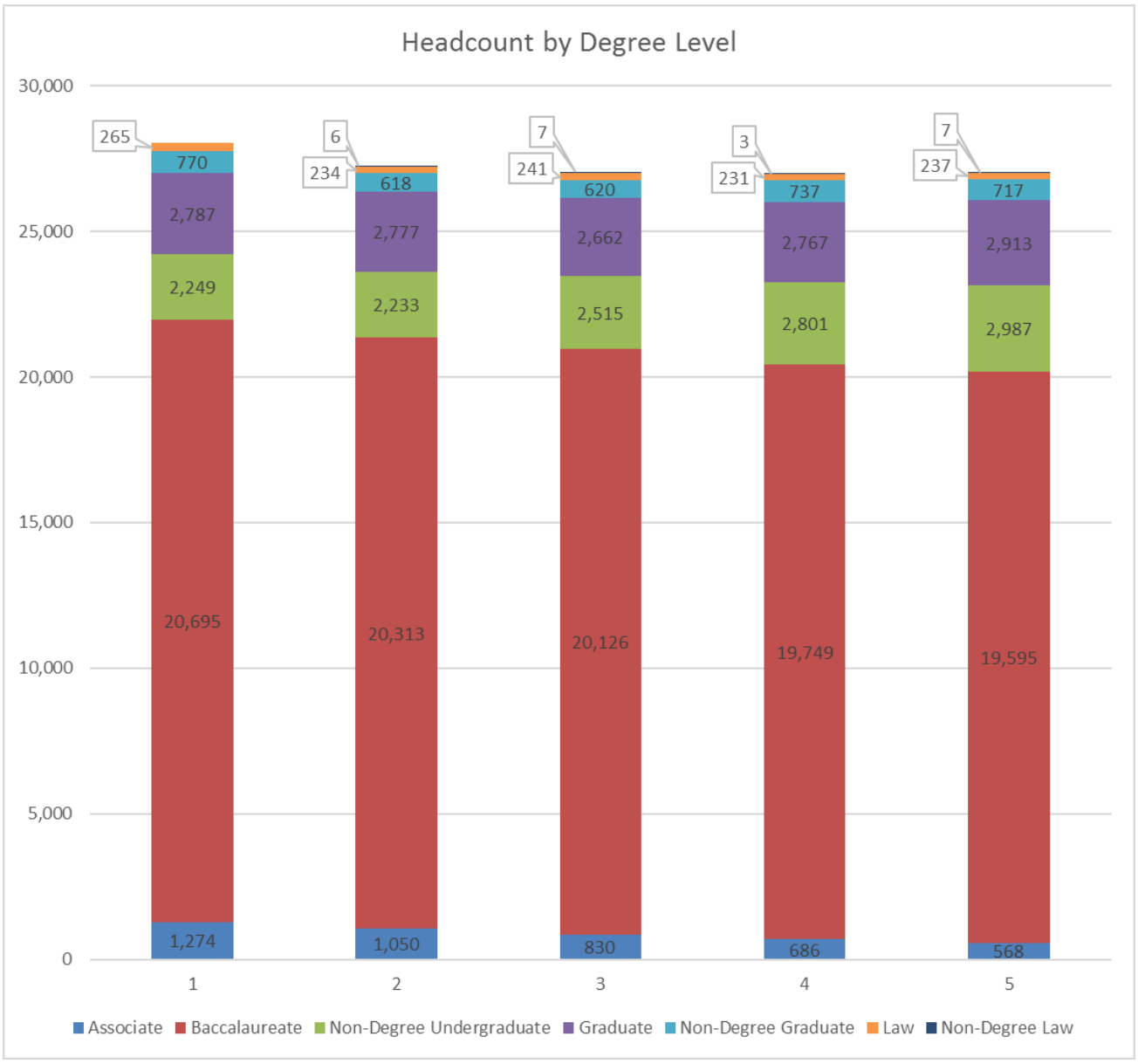
		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% Change 1-year	% Change 5-year
UM	Early College SCH	310	487	481	396	539	36.1%	73.9%
	Undergraduate SCH	113,446	115,562	117,561	120,010	121,684	1.4%	7.3%
	Early College as % of UG SCH	**0.3%**	**0.4%**	**0.4%**	**0.3%**	**0.4%**	**0.1%**	**0.2%**
UMA	Early College SCH	308	336	361	569	953	67.5%	209.4%
	Undergraduate SCH	38,877	37,211	36,940	32,504	30,888	-5.0%	-20.5%
	Early College as % of UG SCH	**0.8%**	**0.9%**	**1.0%**	**1.8%**	**3.1%**	**1.3%**	**2.3%**
UMF	Early College SCH	30	12	49	8	44	450.0%	46.7%
	Undergraduate SCH	26,128	24,590	24,358	24,359	24,031	-1.3%	-8.0%
	Early College as % of UG SCH	**0.1%**	**0.0%**	**0.2%**	**0.0%**	**0.2%**	**0.2%**	**0.1%**
UMFK	Early College SCH	376	761	1,490	1,655	1,752	5.9%	366.0%
	Undergraduate SCH	10,578	11,221	12,266	12,450	12,298	-1.2%	16.3%
	Early College as % of UG SCH	**3.6%**	**6.8%**	**12.1%**	**13.3%**	**14.2%**	**1.0%**	**10.7%**
UMM	Early College SCH	184	190	200	298	240	-19.5%	30.4%
	Undergraduate SCH	7,696	7,448	7,059	6,843	6,501	-5.0%	-15.5%
	Early College as % of UG SCH	**2.4%**	**2.6%**	**2.8%**	**4.4%**	**3.7%**	**-0.7%**	**1.3%**
UMPI	Early College SCH	246	177	680	1,171	2,109	80.1%	757.3%
	Undergraduate SCH	12,010	10,761	10,641	10,826	11,957	10.4%	-0.4%
	Early College as % of UG SCH	**2.0%**	**1.6%**	**6.4%**	**10.8%**	**17.6%**	**6.8%**	**15.6%**
USM	Early College SCH	650	716	759	698	1,022	46.3%	57.2%
	Undergraduate SCH	67,579	63,226	59,792	60,931	62,489	2.6%	-7.5%
	Early College as % of UG SCH	**1.0%**	**1.1%**	**1.3%**	**1.1%**	**1.6%**	**0.5%**	**0.7%**
Total	***Early College SCH***	***2,104***	***2,679***	***4,020***	***4,795***	***6,659***	***38.9%***	***216.5%***
	Undergraduate SCH	***276,313***	***270,019***	***268,616***	***267,922***	***269,848***	***0.7%***	***-2.3%***
	Early College as % of UG SCH	***0.8%***	***1.0%***	***1.5%***	***1.8%***	***2.5%***	***0.7%***	***1.7%***



Spring 2018 Enrollment Report – The University of Maine System

Headcount by Degree Level

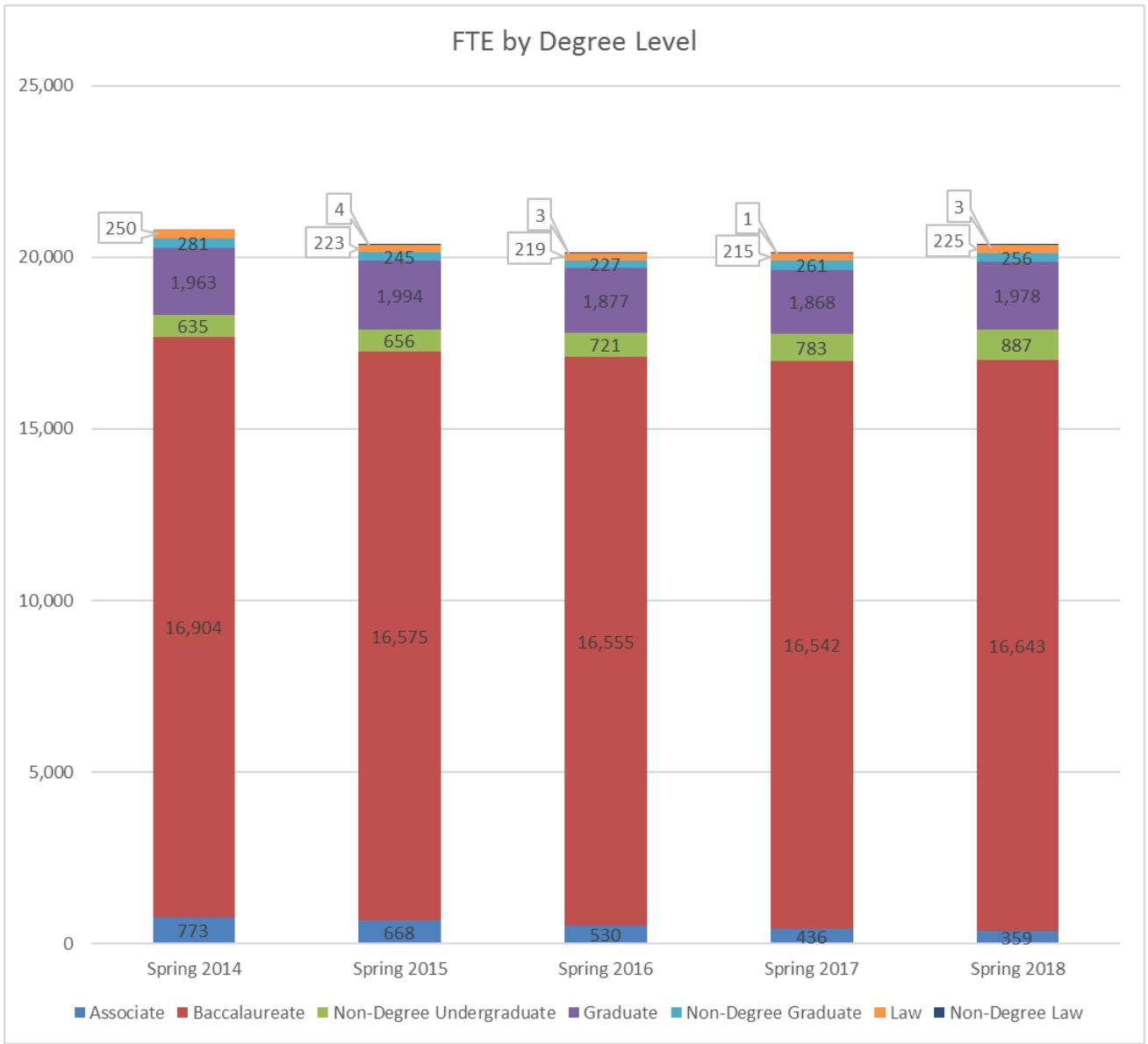
	Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-Year	% Change 5-year	Trend Line
Associate	1,274	1,050	830	686	568	2.1%	-17.2%	-55.4%	
Baccalaureate	20,695	20,313	20,126	19,749	19,595	72.5%	-0.8%	-5.3%	
Non-Degree Undergraduate	2,249	2,233	2,515	2,801	2,987	11.1%	6.6%	32.8%	
Graduate	2,787	2,777	2,662	2,767	2,913	10.8%	5.3%	4.5%	
Non-Degree Graduate	770	618	620	737	717	2.7%	-2.7%	-6.9%	
Law	265	234	241	231	237	0.9%	2.6%	-10.6%	
Non-Degree Law	0	6	7	3	7	0.0%	133.3%	0.0%	
Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***0.2%***	***-3.6%***	



Spring 2018 Enrollment Report – The University of Maine System

FTE by Degree Level

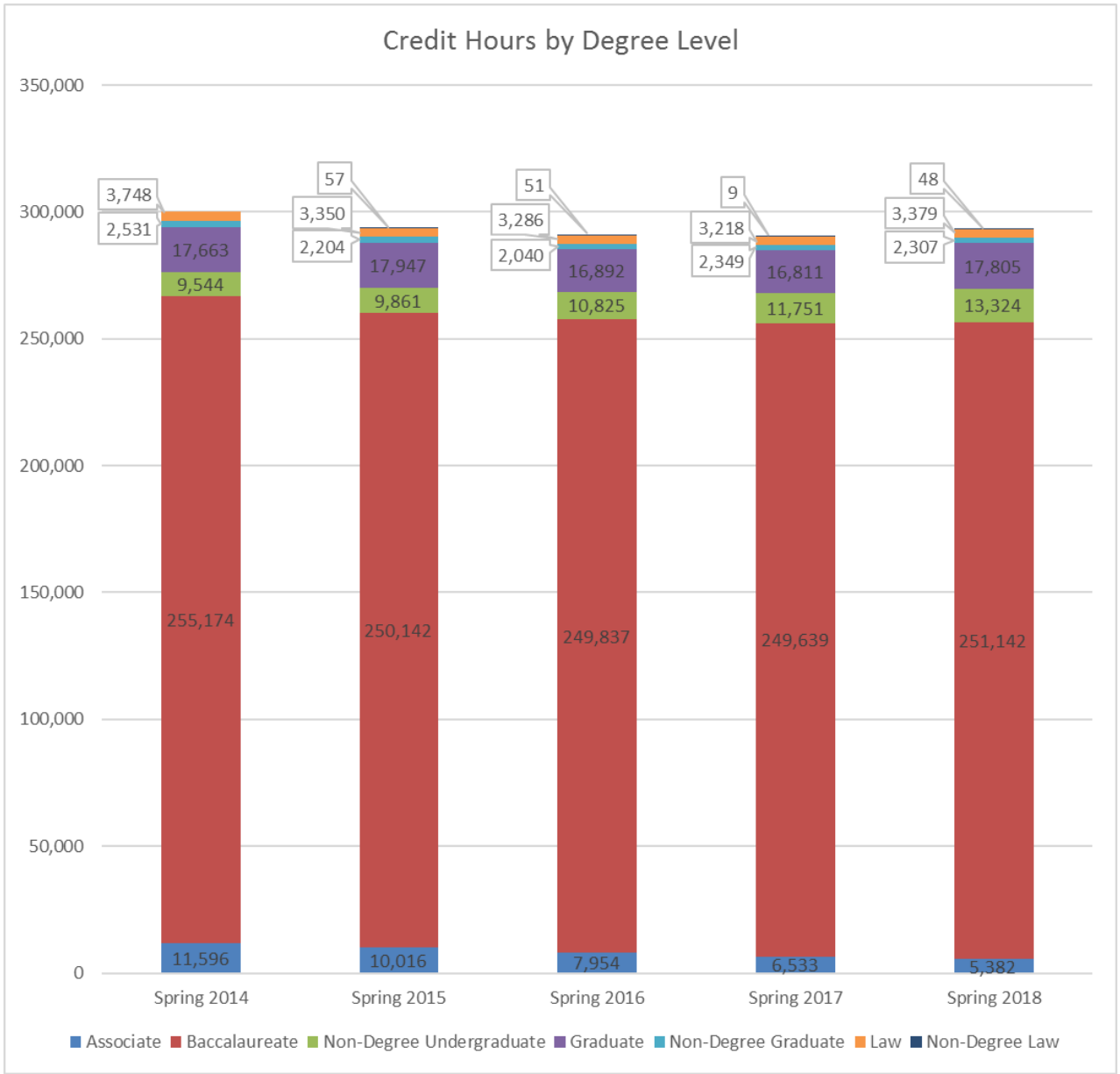
	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017	% of Total	% Change 1-Year	% Change 5-year	Trend Line
Associate	847	738	584	465	398	1.8%	-14.5%	-53.1%	
Baccalaureate	18,227	17,851	17,623	17,692	17,765	81.4%	0.4%	-2.5%	
Non-Degree Undergraduate	833	888	1,073	1,287	1,154	5.3%	-10.3%	38.6%	
Graduate	1,959	1,978	1,932	1,939	1,995	9.1%	2.9%	1.8%	
Non-Degree Graduate	397	336	180	255	272	1.2%	6.7%	-31.4%	
Law	263	243	233	228	227	1.0%	-0.4%	-13.9%	
Non-Degree Law	0	4	4	1	2	0.0%	31.6%	0.0%	
Total	***22,526***	***22,037***	***21,629***	***21,867***	***21,812***	***100.0%***	***-0.3%***	***-3.2%***	



Spring 2018 Enrollment Report – The University of Maine System

Credit Hours by Degree Level

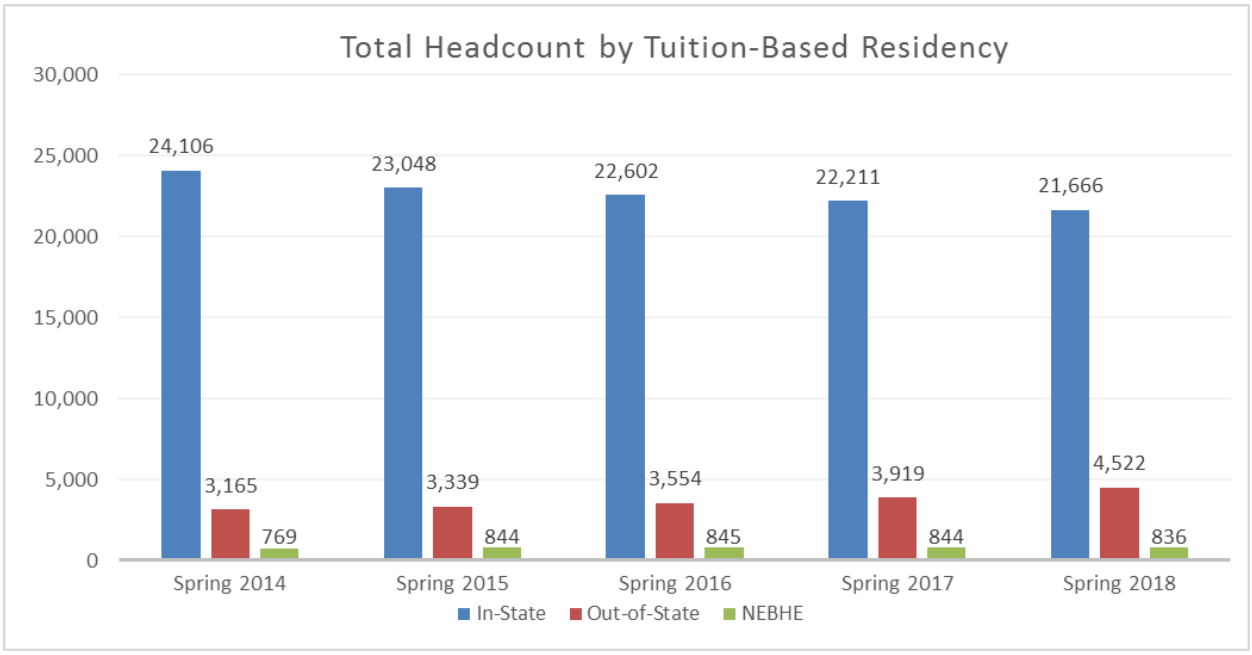
	Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-Year	% Change 5-year	Trend Line
Associate	11,596	10,016	7,954	6,533	5,382	1.8%	-17.6%	-53.6%	
Baccalaureate	255,174	250,142	249,837	249,639	251,142	85.6%	0.6%	-1.6%	
Non-Degree Undergraduate	9,544	9,861	10,825	11,751	13,324	4.5%	13.4%	39.6%	
Graduate	17,663	17,947	16,892	16,811	17,805	6.1%	5.9%	0.8%	
Non-Degree Graduate	2,531	2,204	2,040	2,349	2,307	0.8%	-1.8%	-8.9%	
Law	3,748	3,350	3,286	3,218	3,379	1.2%	5.0%	-9.8%	
Non-Degree Law	0	57	51	9	48	0.0%	433.3%	N/A	
Total	***300,255***	***293,577***	***290,884***	***290,310***	***293,386***	***100.0%***	***1.1%***	***-2.3%***	



Spring 2018 Enrollment Report – The University of Maine System

Headcount by Student Level and Tuition-Based Residency

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
Undergraduate	In-State	20,934	20,089	19,738	19,185	18,528	80.0%	-3.4%	-11.5%	
	Out-of-State	2,580	2,727	2,936	3,254	3,827	16.5%	17.6%	48.3%	
	NEBHE	704	780	797	797	795	3.4%	-0.3%	12.9%	
	Total	**24,218**	**23,596**	**23,471**	**23,236**	**23,150**	**100.0%**	**-0.4%**	**-4.4%**	
Graduate	In-State	3,172	2,959	2,864	3,026	3,138	81.0%	3.7%	-1.1%	
	Out-of-State	585	612	618	665	695	17.9%	4.5%	18.8%	
	NEBHE	65	64	48	47	41	1.1%	-12.8%	-36.9%	
	Total	**3,822**	**3,635**	**3,530**	**3,738**	**3,874**	**100.0%**	**3.6%**	**1.4%**	
Total	**In-State**	**24,106**	**23,048**	**22,602**	**22,211**	**21,666**	**80.2%**	**-2.5%**	**-10.1%**	
	Out-of-State	**3,165**	**3,339**	**3,554**	**3,919**	**4,522**	**16.7%**	**15.4%**	**42.9%**	
	NEBHE	**769**	**844**	**845**	**844**	**836**	**3.1%**	**-0.9%**	**8.7%**	
	Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***0.2%***	***-3.6%***	



Notes:

1. The following table shows student residency based on the tuition rate.
2. Students enrolled under the New England Regional Student Program (NEBHE) pay 150% of in-state tuition, which may include out-of-state students and Canadian students.
3. Students with a tuition residency of Online are included with the out-of-state category.

Spring 2018 Enrollment Report – The University of Maine System

Headcount by Institution and Tuition-Based Residency

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	In-state	7,891	7,598	7,430	7,317	6,962	66.0%	-4.9%	-11.8%	
	Out-of-state	1,942	2,193	2,313	2,570	2,990	28.4%	16.3%	54.0%	
	NEBHE	468	541	581	587	590	5.6%	0.5%	26.1%	
	Total	**10,301**	**10,332**	**10,324**	**10,474**	**10,542**	**100.0%**	**0.6%**	**2.3%**	
UMA	In-state	4,450	4,281	4,275	3,894	3,643	95.4%	-6.4%	-18.1%	
	Out-of-state	141	132	157	136	163	4.3%	19.9%	15.6%	
	NEBHE	12	13	11	11	14	0.4%	27.3%	16.7%	
	Total	**4,603**	**4,426**	**4,443**	**4,041**	**3,820**	**100.0%**	**-5.5%**	**-17.0%**	
UMF	In-state	1,693	1,598	1,621	1,624	1,686	86.0%	3.8%	-0.4%	
	Out-of-state	210	192	192	175	181	9.2%	3.4%	-13.8%	
	NEBHE	72	76	83	96	93	4.7%	-3.1%	29.2%	
	Total	**1,975**	**1,866**	**1,896**	**1,895**	**1,960**	**100.0%**	**3.4%**	**-0.8%**	
UMFK	In-state	964	1,103	1,250	1,327	1,304	88.0%	-1.7%	35.3%	
	Out-of-state	70	109	133	156	172	11.6%	10.3%	145.7%	
	NEBHE	24	28	19	11	6	0.4%	-45.5%	-75.0%	
	Total	**1,058**	**1,240**	**1,402**	**1,494**	**1,482**	**100.0%**	**-0.8%**	**40.1%**	
UMM	In-state	686	678	621	620	598	88.6%	-3.5%	-12.8%	
	Out-of-state	94	78	71	75	56	8.3%	-25.3%	-40.4%	
	NEBHE	20	23	23	21	21	3.1%	0.0%	5.0%	
	Total	**800**	**779**	**715**	**716**	**675**	**100.0%**	**-5.7%**	**-15.6%**	
UMPI	In-state	1,078	948	965	1,026	1,124	87.7%	9.6%	4.3%	
	Out-of-state	40	48	72	90	131	10.2%	45.6%	227.5%	
	NEBHE	68	53	41	32	27	2.1%	-15.6%	-60.3%	
	Total	**1,186**	**1,049**	**1,078**	**1,148**	**1,282**	**100.0%**	**11.7%**	**8.1%**	
USM	In-state	7,344	6,842	6,440	6,403	6,349	87.4%	-0.8%	-13.5%	
	Out-of-state	668	587	616	717	829	11.4%	15.6%	24.1%	
	NEBHE	105	110	87	86	85	1.2%	-1.2%	-19.0%	
	Total	**8,117**	**7,539**	**7,143**	**7,206**	**7,263**	**100.0%**	**0.8%**	**-10.5%**	
Total	**In-state**	**24,106**	**23,048**	**22,602**	**22,211**	**21,666**	**80.2%**	**-2.5%**	**-10.1%**	
	Out-of-state	**3,165**	**3,339**	**3,554**	**3,919**	**4,522**	**16.7%**	**15.4%**	**42.9%**	
	NEBHE	**769**	**844**	**845**	**844**	**836**	**3.1%**	**-0.9%**	**8.7%**	
	Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***0.2%***	***-3.6%***	

Notes:

1. The following table shows student residency based on the student's tuition rate.
2. Students enrolled under the New England Regional Student Program (NEBHE) pay 150% of in-state tuition, which may include out-of-state students and Canadian students.
3. Students with a tuition residency of Online are included with the out-of-state category.

Spring 2018 Enrollment Report – The University of Maine System

Credit Hours by Institution and Tuition-Based Residency

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	In-state	92,756	90,270	89,459	87,822	83,384	63.7%	-5.1%	-10.1%	
	Out-of-state	23,142	26,826	28,610	32,774	39,122	29.9%	19.4%	69.1%	
	NEBHE	6,479	7,415	8,306	8,479	8,348	6.4%	-1.5%	28.8%	
	Total	**122,377**	**124,511**	**126,374**	**129,075**	**130,854**	**100.0%**	**1.4%**	**6.9%**	
UMA	In-state	37,583	35,983	35,523	31,326	29,385	95.1%	-6.2%	-21.8%	
	Out-of-state	1,204	1,130	1,337	1,096	1,380	4.5%	25.9%	14.6%	
	NEBHE	90	98	80	82	123	0.4%	50.0%	36.7%	
	Total	**38,877**	**37,211**	**36,940**	**32,504**	**30,888**	**100.0%**	**-5.0%**	**-20.5%**	
UMF	In-state	22,441	21,125	21,006	21,008	21,007	83.6%	0.0%	-6.4%	
	Out-of-state	3,168	2,907	2,873	2,679	2,687	10.7%	0.3%	-15.2%	
	NEBHE	1,143	1,186	1,260	1,465	1,423	5.7%	-2.9%	24.5%	
	Total	**26,752**	**25,218**	**25,139**	**25,152**	**25,117**	**100.0%**	**-0.1%**	**-6.1%**	
UMFK	In-state	9,262	9,464	10,173	10,043	9,893	80.4%	-1.5%	6.8%	
	Out-of-state	979	1,384	1,846	2,304	2,352	19.1%	2.1%	140.2%	
	NEBHE	337	373	247	103	53	0.4%	-48.5%	-84.3%	
	Total	**10,578**	**11,221**	**12,266**	**12,450**	**12,298**	**100.0%**	**-1.2%**	**16.3%**	
UMM	In-state	6,163	6,104	5,744	5,542	5,594	86.0%	0.9%	-9.2%	
	Out-of-state	1,249	991	985	1,008	695	10.7%	-31.1%	-44.4%	
	NEBHE	284	354	330	293	212	3.3%	-27.6%	-25.4%	
	Total	**7,696**	**7,448**	**7,059**	**6,843**	**6,501**	**100.0%**	**-5.0%**	**-15.5%**	
UMPI	In-state	10,566	9,427	9,188	9,199	9,892	82.7%	7.5%	-6.4%	
	Out-of-state	536	600	949	1,201	1,721	14.4%	43.3%	221.1%	
	NEBHE	908	734	504	426	344	2.9%	-19.2%	-62.1%	
	Total	**12,010**	**10,761**	**10,641**	**10,826**	**11,957**	**100.0%**	**10.4%**	**-0.4%**	
USM	In-state	72,271	68,211	63,583	62,885	63,719	84.1%	1.3%	-11.8%	
	Out-of-state	8,355	7,531	7,787	9,457	10,923	14.4%	15.5%	30.7%	
	NEBHE	1,340	1,465	1,096	1,117	1,130	1.5%	1.1%	-15.7%	
	Total	**81,966**	**77,207**	**72,465**	**73,459**	**75,771**	**100.0%**	**3.1%**	**-7.6%**	
Total	**In-state**	**251,041**	**240,584**	**234,675**	**227,825**	**222,873**	**76.0%**	**-2.2%**	**-11.2%**	
	Out-of-state	**38,633**	**41,369**	**44,386**	**50,519**	**58,880**	**20.1%**	**16.5%**	**52.4%**	
	NEBHE	**10,581**	**11,625**	**11,823**	**11,965**	**11,633**	**4.0%**	**-2.8%**	**9.9%**	
	Total	***300,255***	***293,577***	***290,884***	***290,309***	***293,386***	***100.0%***	***1.1%***	***-2.3%***	

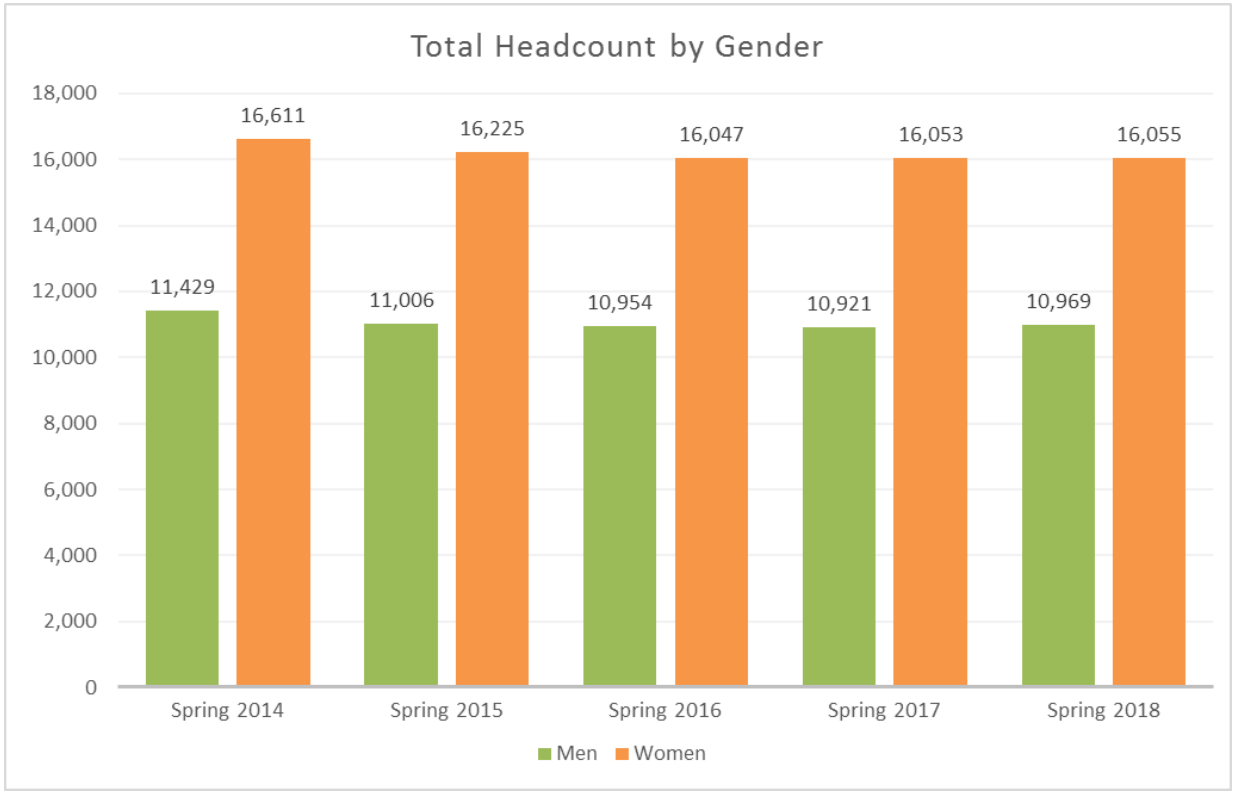
Notes:

1. The following table shows student residency based on the student's tuition rate.
2. Students enrolled under the New England Regional Student Program (NEBHE) pay 150% of in-state tuition, which may include out-of-state students and Canadian students.
3. Students with a tuition residency of Online are included with the out-of-state category.

Spring 2018 Enrollment Report – The University of Maine System

Headcount by Student Level and Gender

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
Undergraduate	Men	10,132	9,782	9,774	9,734	9,771	42.2%	0.4%	-3.6%	
	Women	14,086	13,814	13,697	13,502	13,379	57.8%	-0.9%	-5.0%	
	Total	**24,218**	**23,596**	**23,471**	**23,236**	**23,150**	**100.0%**	**-0.4%**	**-4.4%**	
Graduate	Men	1,297	1,224	1,180	1,187	1,198	30.9%	0.9%	-7.6%	
	Women	2,525	2,411	2,350	2,551	2,676	69.1%	4.9%	6.0%	
	Total	**3,822**	**3,635**	**3,530**	**3,738**	**3,874**	**100.0%**	**3.6%**	**1.4%**	
Total	**Men**	**11,429**	**11,006**	**10,954**	**10,921**	**10,969**	**40.6%**	**0.4%**	**-4.0%**	
	Women	**16,611**	**16,225**	**16,047**	**16,053**	**16,055**	**59.4%**	**0.0%**	**-3.3%**	
	Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***0.2%***	***-3.6%***	



Note: Gender assigned proportionally by institution starting in Fall 2016 for any unknowns represented in the source data.

Spring 2018 Enrollment Report – The University of Maine System

Headcount by Institution and Gender

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	Men	5,128	5,166	5,206	5,244	5,259	49.9%	0.3%	2.6%	
	Women	5,173	5,166	5,118	5,230	5,283	50.1%	1.0%	2.1%	
	Total	**10,301**	**10,332**	**10,324**	**10,474**	**10,542**	**100.0%**	**0.6%**	**2.3%**	
UMA	Men	1,316	1,201	1,188	1,146	1,136	29.7%	-0.9%	-13.7%	
	Women	3,287	3,225	3,255	2,895	2,684	70.3%	-7.3%	-18.3%	
	Total	**4,603**	**4,426**	**4,443**	**4,041**	**3,820**	**100.0%**	**-5.5%**	**-17.0%**	
UMF	Men	655	610	627	629	605	30.9%	-3.8%	-7.6%	
	Women	1,320	1,256	1,269	1,266	1,355	69.1%	7.0%	2.7%	
	Total	**1,975**	**1,866**	**1,896**	**1,895**	**1,960**	**100.0%**	**3.4%**	**-0.8%**	
UMFK	Men	320	391	410	437	406	27.4%	-7.1%	26.9%	
	Women	738	849	992	1,057	1,076	72.6%	1.8%	45.8%	
	Total	**1,058**	**1,240**	**1,402**	**1,494**	**1,482**	**100.0%**	**-0.8%**	**40.1%**	
UMM	Men	269	247	244	208	213	31.6%	2.4%	-20.8%	
	Women	531	532	471	508	462	68.4%	-9.1%	-13.0%	
	Total	**800**	**779**	**715**	**716**	**675**	**100.0%**	**-5.7%**	**-15.6%**	
UMPI	Men	417	366	379	400	485	37.8%	21.3%	16.3%	
	Women	769	683	699	748	797	62.2%	6.6%	3.6%	
	Total	**1,186**	**1,049**	**1,078**	**1,148**	**1,282**	**100.0%**	**11.7%**	**8.1%**	
USM	Men	3,324	3,025	2,900	2,852	2,842	39.1%	-0.4%	-14.5%	
	Women	4,793	4,514	4,243	4,354	4,421	60.9%	1.5%	-7.8%	
	Total	**8,117**	**7,539**	**7,143**	**7,206**	**7,263**	**100.0%**	**0.8%**	**-10.5%**	
Total	**Men**	**11,429**	**11,006**	**10,954**	**10,916**	**10,946**	**40.5%**	**0.3%**	**-4.2%**	
	Women	**16,611**	**16,225**	**16,047**	**16,058**	**16,078**	**59.5%**	**0.1%**	**-3.2%**	
	Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***0.2%***	***-3.6%***	

Note: Gender assigned proportionally by institution as of Fall 2016 for any unknowns represented in the source data.

Spring 2018 Enrollment Report – The University of Maine System

Credit Hours by Institution and Gender

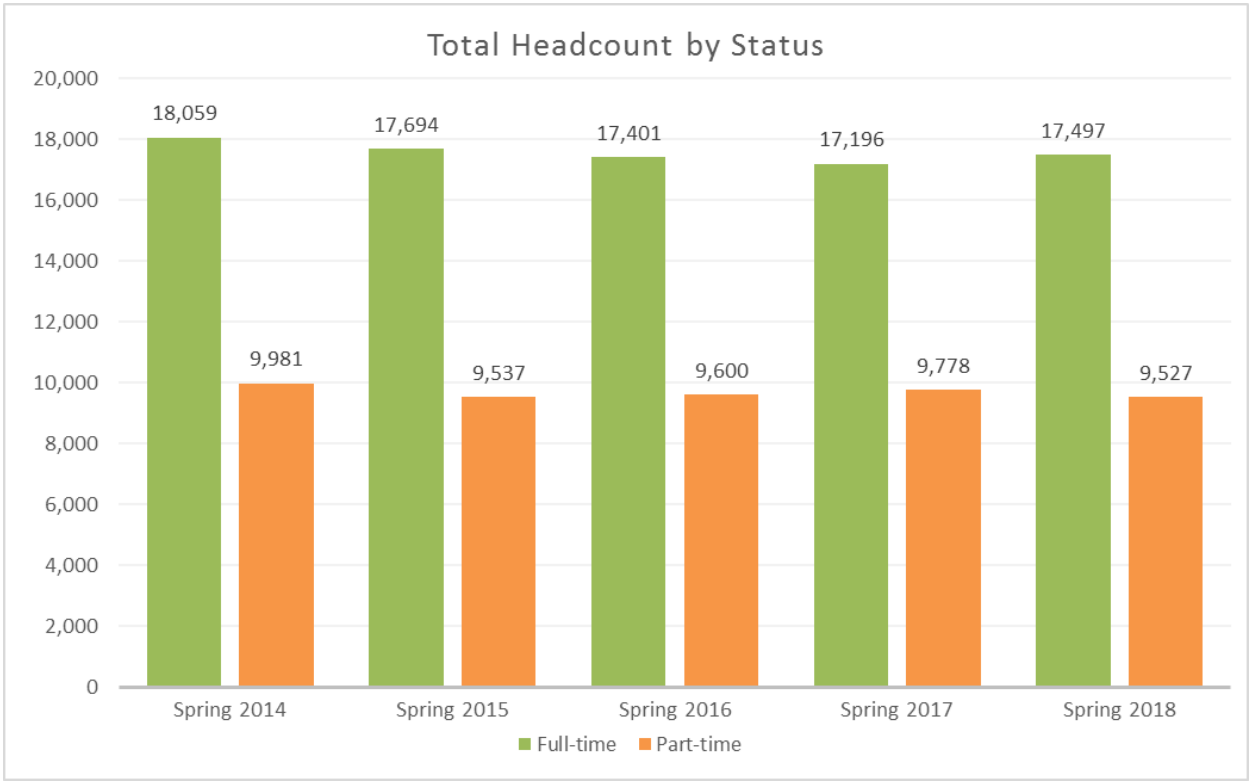
		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	Men	63,321	64,477	66,115	67,179	68,093	52.0%	1.4%	7.5%	
	Women	59,056	60,035	60,259	61,897	62,761	48.0%	1.4%	6.3%	
	Total	**122,377**	**124,511**	**126,374**	**129,075**	**130,854**	**100.0%**	**1.4%**	**6.9%**	
UMA	Men	11,674	10,524	10,036	9,338	9,420	30.5%	0.9%	-19.3%	
	Women	27,203	26,687	26,904	23,166	21,468	69.5%	-7.3%	-21.1%	
	Total	**38,877**	**37,211**	**36,940**	**32,504**	**30,888**	**100.0%**	**-5.0%**	**-20.5%**	
UMF	Men	9,016	8,419	8,580	8,640	8,136	32.4%	-5.8%	-9.8%	
	Women	17,736	16,799	16,559	16,512	16,981	67.6%	2.8%	-4.3%	
	Total	**26,752**	**25,218**	**25,139**	**25,152**	**25,117**	**100.0%**	**-0.1%**	**-6.1%**	
UMFK	Men	3,329	3,735	3,847	3,896	3,738	30.4%	-4.1%	12.3%	
	Women	7,249	7,486	8,419	8,554	8,560	69.6%	0.1%	18.1%	
	Total	**10,578**	**11,221**	**12,266**	**12,450**	**12,298**	**100.0%**	**-1.2%**	**16.3%**	
UMM	Men	2,716	2,475	2,402	2,109	2,122	32.6%	0.6%	-21.9%	
	Women	4,980	4,974	4,657	4,734	4,379	67.4%	-7.5%	-12.1%	
	Total	**7,696**	**7,448**	**7,059**	**6,843**	**6,501**	**100.0%**	**-5.0%**	**-15.5%**	
UMPI	Men	4,693	4,016	4,076	3,967	4,746	39.7%	19.6%	1.1%	
	Women	7,317	6,745	6,565	6,859	7,211	60.3%	5.1%	-1.4%	
	Total	**12,010**	**10,761**	**10,641**	**10,826**	**11,957**	**100.0%**	**10.4%**	**-0.4%**	
USM	Men	34,371	31,748	30,329	30,083	30,321	40.0%	0.8%	-11.8%	
	Women	47,595	45,459	42,136	43,375	45,451	60.0%	4.8%	-4.5%	
	Total	**81,966**	**77,207**	**72,465**	**73,458**	**75,771**	**100.0%**	**3.1%**	**-7.6%**	
Total	**Men**	**129,119**	**125,393**	**125,385**	**125,212**	**126,576**	**43.1%**	**1.1%**	**-2.0%**	
	Women	**171,136**	**168,184**	**165,499**	**165,096**	**166,810**	**56.9%**	**1.0%**	**-2.5%**	
	Total	***300,255***	***293,577***	***290,884***	***290,308***	***293,386***	***100.0%***	***1.1%***	***-2.3%***	

Note: Gender assigned proportionally by institution as of Fall 2016 for any unknowns represented in the source data.

Spring 2018 Enrollment Report – The University of Maine System

Headcount by Student Level and Status

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
Undergraduate	Full-time	15,946	15,626	15,447	15,253	15,420	66.6%	1.1%	-3.3%	
	Part-time	8,272	7,970	8,024	7,983	7,730	33.4%	-3.2%	-6.6%	
	Total	**24,218**	**23,596**	**23,471**	**23,236**	**23,150**	**100.0%**	**-0.4%**	**-4.4%**	
Graduate	Full-time	2,113	2,068	1,954	1,943	2,077	53.6%	6.9%	-1.7%	
	Part-time	1,709	1,567	1,576	1,795	1,797	46.4%	0.1%	5.1%	
	Total	**3,822**	**3,635**	**3,530**	**3,738**	**3,874**	**100.0%**	**3.6%**	**1.4%**	
Total	**Full-time**	**18,059**	**17,694**	**17,401**	**17,196**	**17,497**	**64.7%**	**1.8%**	**-3.1%**	
	Part-time	**9,981**	**9,537**	**9,600**	**9,778**	**9,527**	**35.3%**	**-2.6%**	**-4.5%**	
	Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***0.2%***	***-3.6%***	



Spring 2018 Enrollment Report – The University of Maine System

Headcount by Institution and Status

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	Full-time	8,125	8,330	8,382	8,379	8,486	80.5%	1.3%	4.4%	
	Part-time	2,176	2,002	1,942	2,095	2,056	19.5%	-1.9%	-5.5%	
	Total	**10,301**	**10,332**	**10,324**	**10,474**	**10,542**	**100.0%**	**0.6%**	**2.3%**	
UMA	Full-time	1,603	1,543	1,517	1,278	1,245	32.6%	-2.6%	-22.3%	
	Part-time	3,000	2,883	2,926	2,763	2,575	67.4%	-6.8%	-14.2%	
	Total	**4,603**	**4,426**	**4,443**	**4,041**	**3,820**	**100.0%**	**-5.5%**	**-17.0%**	
UMF	Full-time	1,684	1,574	1,583	1,564	1,557	79.4%	-0.4%	-7.5%	
	Part-time	291	292	313	331	403	20.6%	21.8%	38.5%	
	Total	**1,975**	**1,866**	**1,896**	**1,895**	**1,960**	**100.0%**	**3.4%**	**-0.8%**	
UMFK	Full-time	526	487	515	523	524	35.4%	0.2%	-0.4%	
	Part-time	532	753	887	971	958	64.6%	-1.3%	80.1%	
	Total	**1,058**	**1,240**	**1,402**	**1,494**	**1,482**	**100.0%**	**-0.8%**	**40.1%**	
UMM	Full-time	404	390	389	360	345	51.1%	-4.2%	-14.6%	
	Part-time	396	389	326	356	330	48.9%	-7.3%	-16.7%	
	Total	**800**	**779**	**715**	**716**	**675**	**100.0%**	**-5.7%**	**-15.6%**	
UMPI	Full-time	678	624	603	588	639	49.8%	8.7%	-5.8%	
	Part-time	508	425	475	560	643	50.2%	14.8%	26.6%	
	Total	**1,186**	**1,049**	**1,078**	**1,148**	**1,282**	**100.0%**	**11.7%**	**8.1%**	
USM	Full-time	5,039	4,746	4,412	4,504	4,701	64.7%	4.4%	-6.7%	
	Part-time	3,078	2,793	2,731	2,702	2,562	35.3%	-5.2%	-16.8%	
	Total	**8,117**	**7,539**	**7,143**	**7,206**	**7,263**	**100.0%**	**0.8%**	**-10.5%**	
Total	**Full-time**	**18,059**	**17,694**	**17,401**	**17,196**	**17,497**	**64.7%**	**1.8%**	**-3.1%**	
	Part-time	**9,981**	**9,537**	**9,600**	**9,778**	**9,527**	**35.3%**	**-2.6%**	**-4.5%**	
	Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***0.2%***	***-3.6%***	

Spring 2018 Enrollment Report – The University of Maine System

Credit Hours by Institution and Status

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	Full-time	111,726	114,626	117,087	119,622	121,337	92.7%	1.4%	8.6%	
	Part-time	10,651	9,885	9,287	9,453	9,517	7.3%	0.7%	-10.7%	
	Total	**122,377**	**124,511**	**126,374**	**129,075**	**130,854**	**100.0%**	**1.4%**	**6.9%**	
UMA	Full-time	20,404	19,659	19,304	16,297	16,044	51.9%	-1.6%	-21.4%	
	Part-time	18,473	17,552	17,636	16,207	14,844	48.1%	-8.4%	-19.6%	
	Total	**38,877**	**37,211**	**36,940**	**32,504**	**30,888**	**100.0%**	**-5.0%**	**-20.5%**	
UMF	Full-time	25,502	23,959	23,785	23,801	23,550	93.8%	-1.1%	-7.7%	
	Part-time	1,251	1,259	1,354	1,351	1,567	6.2%	16.0%	25.3%	
	Total	**26,752**	**25,218**	**25,139**	**25,152**	**25,117**	**100.0%**	**-0.1%**	**-6.1%**	
UMFK	Full-time	7,883	7,254	7,719	7,779	7,508	61.1%	-3.5%	-4.8%	
	Part-time	2,695	3,967	4,547	4,671	4,790	38.9%	2.5%	77.7%	
	Total	**10,578**	**11,221**	**12,266**	**12,450**	**12,298**	**100.0%**	**-1.2%**	**16.3%**	
UMM	Full-time	5,794	5,485	5,463	5,064	4,867	74.9%	-3.9%	-16.0%	
	Part-time	1,902	1,963	1,596	1,779	1,635	25.1%	-8.1%	-14.1%	
	Total	**7,696**	**7,448**	**7,059**	**6,843**	**6,501**	**100.0%**	**-5.0%**	**-15.5%**	
UMPI	Full-time	9,536	8,739	8,458	8,229	8,930	74.7%	8.5%	-6.4%	
	Part-time	2,474	2,022	2,183	2,597	3,027	25.3%	16.6%	22.4%	
	Total	**12,010**	**10,761**	**10,641**	**10,826**	**11,957**	**100.0%**	**10.4%**	**-0.4%**	
USM	Full-time	64,800	61,214	57,133	58,687	61,974	81.8%	5.6%	-4.4%	
	Part-time	17,166	15,993	15,332	14,772	13,798	18.2%	-6.6%	-19.6%	
	Total	**81,966**	**77,207**	**72,465**	**73,459**	**75,771**	**100.0%**	**3.1%**	**-7.6%**	
Total	**Full-time**	**245,643**	**240,936**	**238,949**	**239,479**	**244,209**	**83.2%**	**2.0%**	**-0.6%**	
	Part-time	**54,612**	**52,641**	**51,935**	**50,830**	**49,177**	**16.8%**	**-3.3%**	**-10.0%**	
	Total	***300,255***	***293,577***	***290,884***	***290,309***	***293,386***	***100.0%***	***1.1%***	***-2.3%***	

Spring 2018 Enrollment Report – The University of Maine System

First-time Headcount by Institution and Tuition-Based Residency

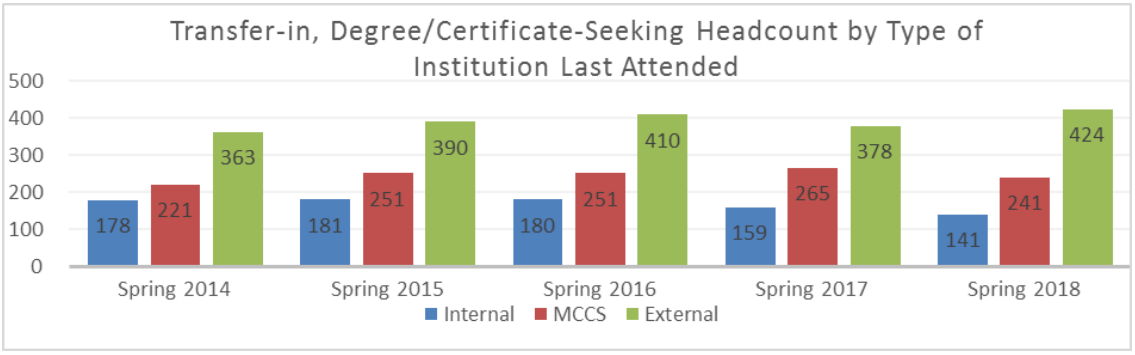
		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
UM	In-state	31	32	31	21	25	64.1%	19.0%	-19.4%	
	Out-of-state	17	5	6	5	11	28.2%	120.0%	-35.3%	
	NEBHE	2	1	0	3	3	7.7%	0.0%	50.0%	
	Total	**50**	**38**	**37**	**29**	**39**	**100.0%**	**34.5%**	**-22.0%**	
UMA	In-state	152	126	142	115	97	95.1%	-15.7%	-36.2%	
	Out-of-state	4	3	1	4	5	4.9%	25.0%	25.0%	
	NEBHE	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**156**	**129**	**143**	**119**	**102**	**100.0%**	**-14.3%**	**-34.6%**	
UMF	In-state	9	9	9	12	6	100.0%	-50.0%	-33.3%	
	Out-of-state	0	0	0	1	0	0.0%	-100.0%	N/A	
	NEBHE	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**9**	**9**	**9**	**13**	**6**	**100.0%**	**-53.8%**	**-33.3%**	
UMFK	In-state	10	7	3	5	3	50.0%	-40.0%	-70.0%	
	Out-of-state	1	1	3	2	3	50.0%	50.0%	200.0%	
	NEBHE	1	0	0	0	0	0.0%	N/A	-100.0%	
	Total	**12**	**8**	**6**	**7**	**6**	**100.0%**	**-14.3%**	**-50.0%**	
UMM	In-state	12	9	8	7	3	100.0%	-57.1%	-75.0%	
	Out-of-state	1	0	0	0	0	0.0%	N/A	-100.0%	
	NEBHE	0	0	0	0	0	0.0%	N/A	N/A	N/A
	Total	**13**	**9**	**8**	**7**	**3**	**100.0%**	**-57.1%**	**-76.9%**	
UMPI	In-state	16	16	6	5	13	68.4%	160.0%	-18.8%	
	Out-of-state	1	0	4	3	6	31.6%	100.0%	500.0%	
	NEBHE	2	0	0	0	0	0.0%	N/A	-100.0%	
	Total	**19**	**16**	**10**	**8**	**19**	**100.0%**	**137.5%**	**0.0%**	
USM	In-state	22	23	32	37	27	84.4%	-27.0%	22.7%	
	Out-of-state	3	1	7	12	4	12.5%	-66.7%	33.3%	
	NEBHE	1	1	0	0	1	3.1%	N/A	0.0%	
	Total	**26**	**25**	**39**	**49**	**32**	**100.0%**	**-34.7%**	**23.1%**	
Total	**In-state**	**252**	**222**	**231**	**202**	**174**	**84.1%**	**-13.9%**	**-31.0%**	
	Out-of-state	**27**	**10**	**21**	**27**	**29**	**14.0%**	**7.4%**	**7.4%**	
	NEBHE	**6**	**2**	**0**	**3**	**4**	**1.9%**	**33.3%**	**-33.3%**	
	Total	***285***	***234***	***252***	***232***	***207***	***100.0%***	***-10.8%***	***-27.4%***	

Note: NEBHE includes Canadian students. Students with a tuition residency of Online are included with the out-of-state category.

Spring 2018 Enrollment Report – The University of Maine System

Transfer-in, Degree/Certificate-Seeking Undergraduate Headcount by Type of Institution Last Attended and Tuition-Based Residency

		Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	1-year Change #	1-year Change %	Trend Line
Internal (UMS)	In-State	175	178	179	153	134	-19	-12.4%	
	Out-of-State	3	3	1	6	7	1	16.7%	
	Total	*178*	*181*	*180*	*159*	*141*	*-18*	*-11.3%*	
Maine Community College System	In-State	218	249	246	260	239	-21	-8.1%	
	Out-of-State	3	2	5	5	2	-3	-60.0%	
	Total	*221*	*251*	*251*	*265*	*241*	*-24*	*-9.1%*	
External (excluding MCCS)	In-State	280	323	316	305	325	20	6.6%	
	Out-of-State	83	67	94	73	99	26	35.6%	
	Total	*363*	*390*	*410*	*378*	*424*	*46*	*12.2%*	
Total	**In-State**	**673**	**750**	**741**	**718**	**698**	**-20**	**-2.8%**	
	Out-of-State	**89**	**72**	**100**	**84**	**108**	**24**	**28.6%**	
	Total	***762***	***822***	***841***	***802***	***806***	***4***	***0.5%***	



Spring 2018 Transfer-in, Degree/Certificate-Seeking Undergraduate Headcount by Type of Institution Last Attended, Tuition-Based Residency, and Institution

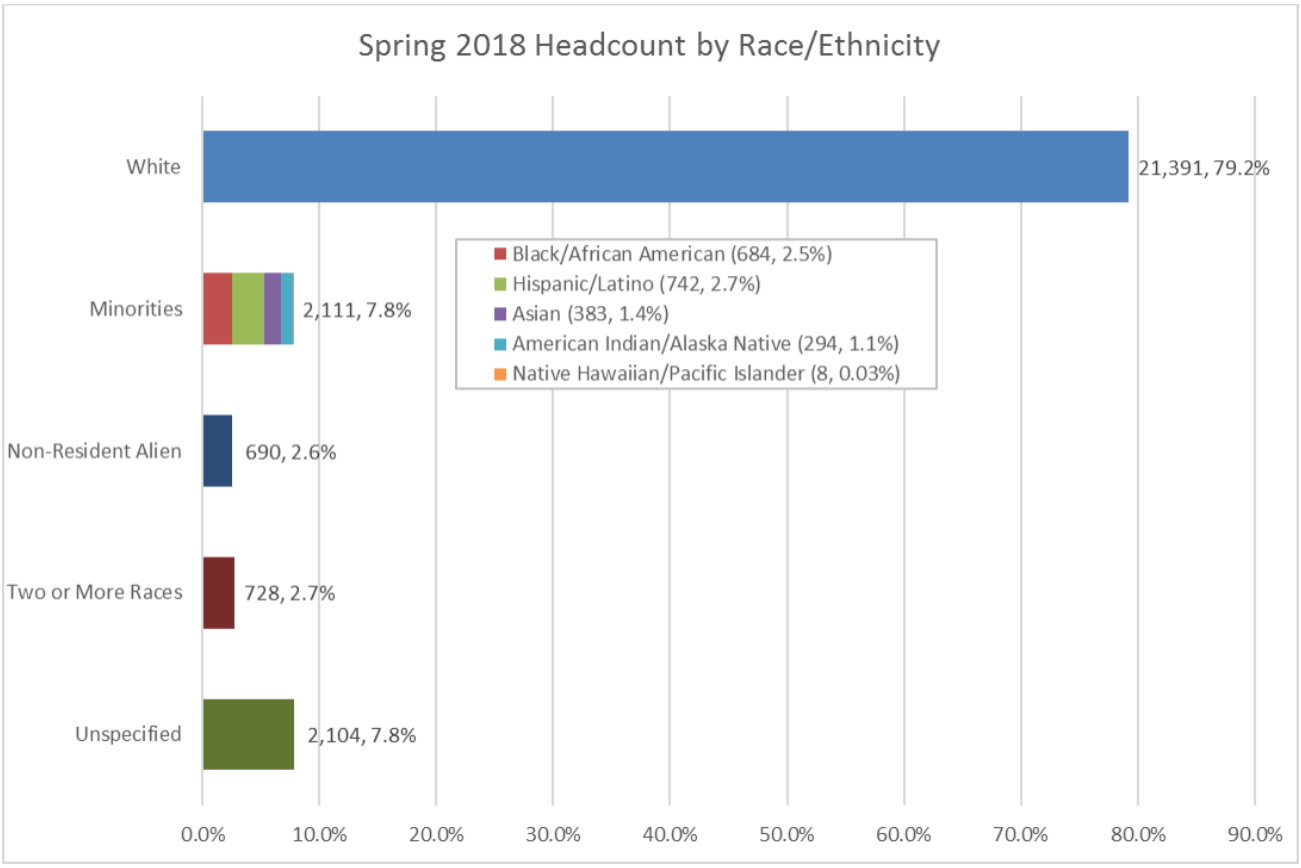
		UM	UMA	UMF	UMFK	UMM	UMPI	USM	Total
Internal (UMS)	In-State	18	45	13	8	4	15	31	134
	Out-of-State	2	2				1	2	7
	Total	*20*	*47*	*13*	*8*	*4*	*16*	*33*	*141*
Maine Community College System	In-State	25	62	6	25	2	13	106	239
	Out-of-State	0	1	0	0	0	0	1	2
	Total	*25*	*63*	*6*	*25*	*2*	*13*	*107*	*241*
External (excluding MCCS)	In-State	74	77	16	17	8	19	114	325
	Out-of-State	37	25	4	8	4	6	15	99
	Total	*111*	*102*	*20*	*25*	*12*	*25*	*129*	*424*
Total	**In-State**	**117**	**184**	**35**	**50**	**14**	**47**	**251**	**698**
	Out-of-State	**39**	**28**	**4**	**8**	**4**	**7**	**18**	**108**
	Total	***156***	***212***	***39***	***58***	***18***	***54***	***269***	***806***

Note: Students with a tuition residency of Online are included with the out-of-state category.

Spring 2018 Enrollment Report – The University of Maine System

Headcount by Race/Ethnicity

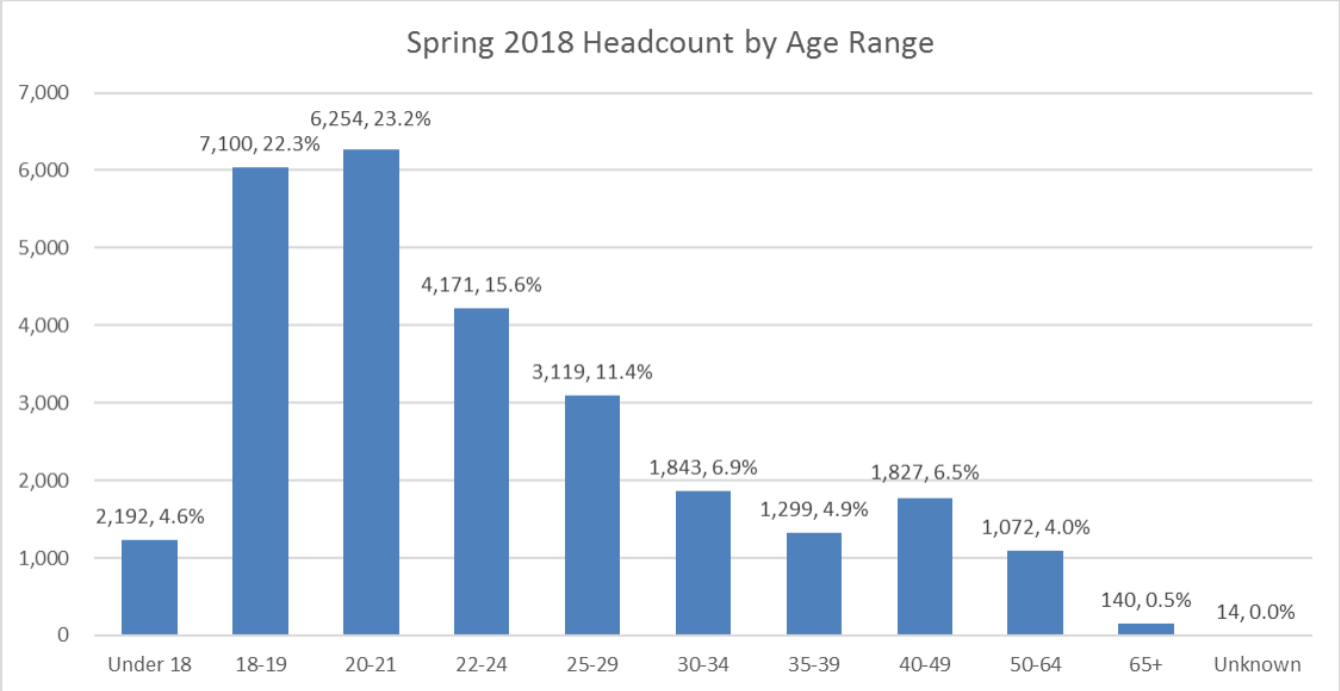
	Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	1-year Change #	1-year Change %	5-year Change #	5-year Change %	Trend Line
White	22,194	21,538	21,411	21,514	21,391	79.2%	-123	-0.6%	-803	-3.6%	
Black/African American	509	530	578	612	684	2.5%	72	11.8%	175	34.4%	
Hispanic / Latino	499	511	575	640	742	2.7%	102	15.9%	243	48.7%	
Asian	345	344	345	376	383	1.4%	7	1.9%	38	11.0%	
American Indian / Alaskan	388	354	326	300	294	1.1%	-6	-2.0%	-94	-24.2%	
Hawaii / Pacific Islands	15	16	11	11	8	0.0%	-3	-27.3%	-7	-46.7%	
Non-resident alien	760	810	785	698	690	2.6%	-8	-1.1%	-70	-9.2%	
Two or more races	549	604	611	660	728	2.7%	68	10.3%	179	32.6%	
Unspecified	2,781	2,524	2,359	2,163	2,104	7.8%	-59	-2.7%	-677	-24.3%	
Total	***28,040***	***27,231***	***27,001***	***26,974***	***27,024***	***100.0%***	***50***	***0.2%***	***-1,016***	***-3.6%***	



Spring 2018 Enrollment Report – The University of Maine System

Headcount by Age Range

Age Range	Spring 2014		Spring 2015		Spring 2016		Spring 2017		Spring 2018		% Change		Trend Line
	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	1-year	5-year	
Under 18	420	1.5%	504	1.9%	733	2.7%	959	3.6%	1,231	4.6%	28.4%	193.1%	
18-19	5,718	20.4%	5,527	20.3%	5,460	20.2%	5,676	21.0%	6,034	22.3%	6.3%	5.5%	
20-21	6,271	22.4%	6,357	23.3%	6,360	23.6%	6,265	23.2%	6,261	23.2%	-0.1%	-0.2%	
22-24	4,946	17.6%	4,609	16.9%	4,597	17.0%	4,460	16.5%	4,221	15.6%	-5.4%	-14.7%	
25-29	3,455	12.3%	3,329	12.2%	3,169	11.7%	3,290	12.2%	3,091	11.4%	-6.0%	-10.5%	
30-34	2,107	7.5%	2,095	7.7%	1,931	7.2%	1,928	7.1%	1,856	6.9%	-3.7%	-11.9%	
35-39	1,492	5.3%	1,329	4.9%	1,402	5.2%	1,344	5.0%	1,323	4.9%	-1.6%	-11.3%	
40-49	2,150	7.7%	2,043	7.5%	2,001	7.4%	1,786	6.6%	1,767	6.5%	-1.1%	-17.8%	
50-64	1,334	4.8%	1,266	4.6%	1,199	4.4%	1,129	4.2%	1,090	4.0%	-3.5%	-18.3%	
65+	129	0.5%	155	0.6%	144	0.5%	128	0.5%	148	0.5%	15.6%	14.7%	
Unknown	18	0.1%	17	0.1%	5	0.0%	9	0.0%	2	0.0%	-77.8%	-88.9%	
Total	***28,040***	***100%***	***27,231***	***100%***	***27,001***	***100%***	***26,974***	***100%***	***27,024***	***100%***	***0.2%***	***-3.6%***	



Five-Year Enrollment Change by Summarized Age Ranges

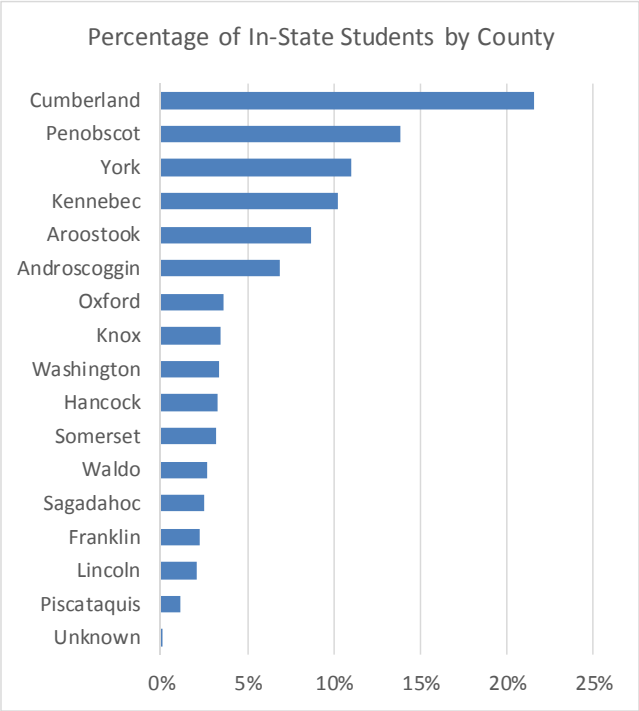
		Under 18	18 - 24	25 - 39	40 - 64	65 and over	Unknown	Total
Spring 2014		420	16,935	7,054	3,484	129	18	**28,040**
Spring 2017		959	16,401	6,562	2,915	128	9	**26,974**
Spring 2018		1,231	16,516	6,270	2,857	148	2	**27,024**
1-Year Change	**#**	**272**	**115**	**-292**	**-58**	**20**	**-7**	**50**
	%	**28.4%**	**0.7%**	**-4.4%**	**-2.0%**	**15.6%**	**-77.8%**	**0.2%**
5-Year Change	**#**	**811**	**-419**	**-784**	**-627**	**19**	**-16**	**-1,016**
	%	**193.1%**	**-2.5%**	**-11.1%**	**-18.0%**	**14.7%**	**-88.9%**	**-3.6%**

Spring 2018 Enrollment Report – The University of Maine System

Spring 2018 Headcount Residency (Based on Original Home Address)

Headcount of In-State Students by County

County	Headcount	% of Total In-State
Cumberland	4,551	21.6%
Penobscot	2,916	13.9%
York	2,318	11.0%
Kennebec	2,162	10.3%
Aroostook	1,831	8.7%
Androscoggin	1,458	6.9%
Oxford	769	3.7%
Knox	719	3.4%
Washington	707	3.4%
Hancock	685	3.3%
Somerset	671	3.2%
Waldo	555	2.6%
Sagadahoc	529	2.5%
Franklin	472	2.2%
Lincoln	440	2.1%
Piscataquis	245	1.2%
Unknown	14	0.1%
Total In-State	***21,042***	***100.0%***



Headcount of Out-of-State Students by State

State	Headcount	% of Total Out-of-State
Massachusetts	1,761	32.5%
New Hampshire	639	11.8%
Connecticut	598	11.0%
New York	335	6.2%
New Jersey	280	5.2%
Vermont	252	4.6%
California	165	3.0%
Pennsylvania	160	3.0%
Rhode Island	143	2.6%
Florida	118	2.2%
Other States	972	17.9%
Total Out-of-State	***5,423***	***100.0%***

Headcount of International Students

Country	Headcount	% of Total International
Canada	123	22.8%
China	74	13.7%
India	30	5.6%
Nepal	26	4.8%
Saudi Arabia	22	4.1%
United Kingdom	19	3.5%
Iran	16	3.0%
France	14	2.6%
Jamaica	14	2.6%
Austria	9	1.7%
Bangladesh	9	1.7%
Other Countries	183	34.0%
Total International	***539***	***100.0%***

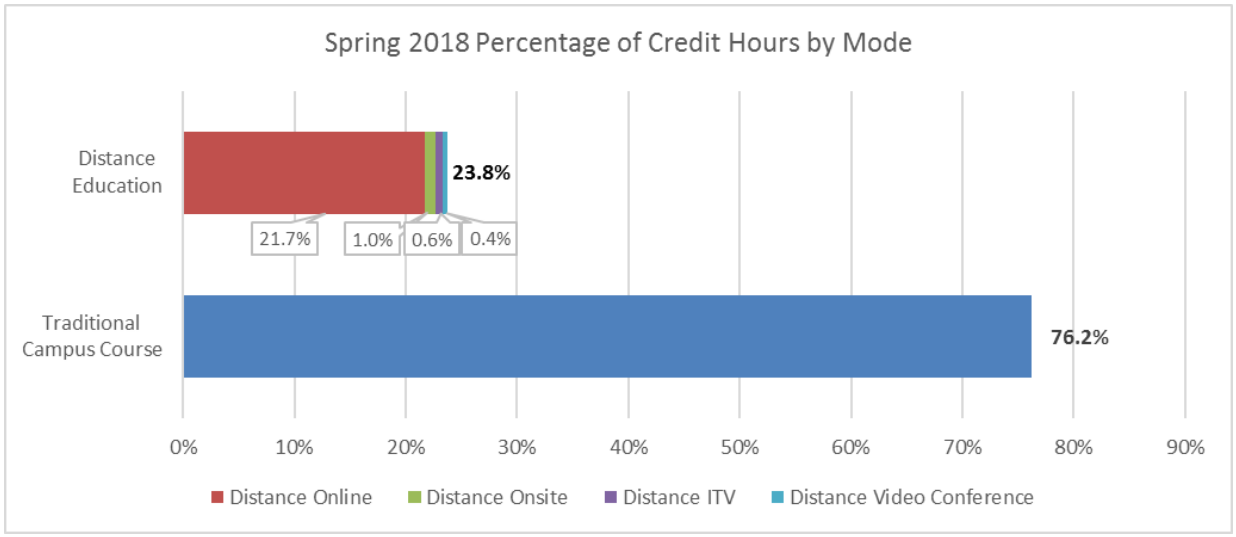
Headcount Residency Totals

	Headcount	% of Total
Total In-State	21,042	77.9%
Total Out-of-State	5,423	20.1%
Total International	539	2.0%
Total Unknown	20	0.1%
Total	***27,024***	***100.0%***

Spring 2018 Enrollment Report – The University of Maine System

Spring 2018 Distance Education Credit Hours by Mode and Institution

	UM	UMA	UMF	UMFK	UMM	UMPI	USM	Total	% of Total
Distance ITV	0.0	1,738.0	0.0	0.0	120.0	0.0	0.0	***1,858.0***	**0.6%**
Distance Online	17,778.0	17,872.0	1,008.0	6,110.0	2,473.0	2,756.0	15,669.0	***63,666.0***	**21.7%**
Distance Onsite	404.0	2,009.0	114.0	0.0	0.0	340.0	0.0	***2,867.0***	**1.0%**
Distance Video Conference	91.0	831.0	42.0	0.0	99.0	90.0	141.0	***1,294.0***	**0.4%**
Total Distance Education	**18,273.0**	**22,450.0**	**1,164.0**	**6,110.0**	**2,692.0**	**3,186.0**	**15,810.0**	***69,685.0***	**23.8%**
Traditional Campus Course	112,580.5	8,438.0	23,953.0	6,188.0	3,809.0	8,771.0	59,961.0	***223,700.5***	**76.2%**
Total Credit Hours	***130,853.5***	***30,888.0***	***25,117.0***	***12,298.0***	***6,501.0***	***11,957.0***	***75,771.0***	***293,385.5***	***100.0%***



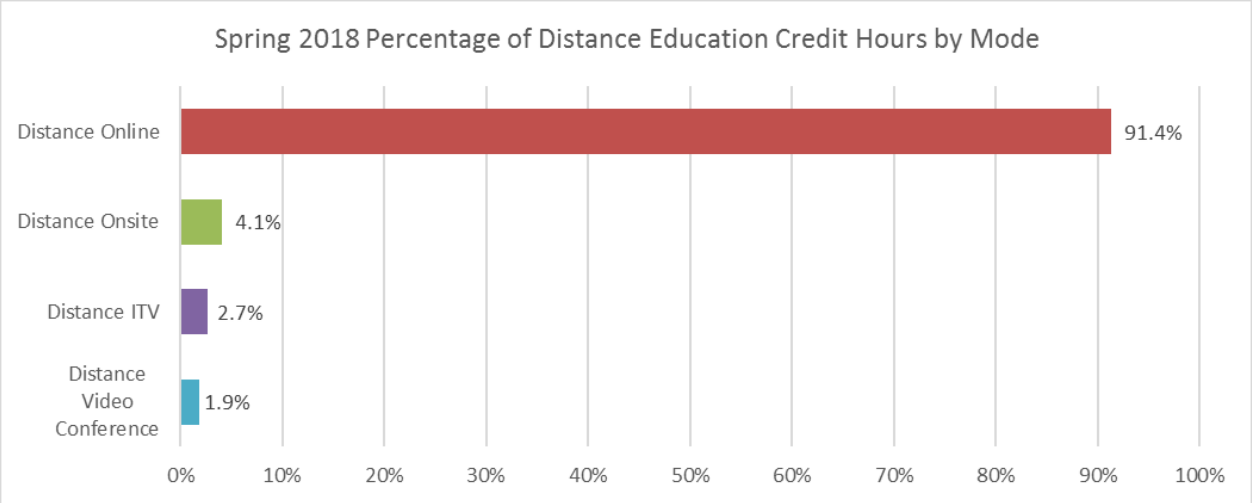
Total Semester Credit Hours by Mode

	Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018	% of Total	% Change 1-year	% Change 5-year	Trend Line
Distance ITV	5,862.0	4,664.0	3,916.0	2,949.0	1,858.0	**0.6%**	-37.0%	-68.3%	
Distance Online	49,890.0	54,396.5	56,877.0	58,966.5	63,666.0	**21.7%**	8.0%	27.6%	
Distance Onsite	4,096.0	3,141.0	3,467.0	2,523.0	2,867.0	**1.0%**	13.6%	-30.0%	
Distance Video Conference	2,087.0	2,101.0	2,424.5	1,408.0	1,294.0	**0.4%**	-8.1%	-38.0%	
Total Distance Education	61,935.0	64,302.5	66,684.5	65,846.5	69,685.0	**23.8%**	5.8%	12.5%	
Traditional Campus Course	238,319.8	229,274.3	224,199.3	224,461.5	223,700.5	**76.2%**	-0.3%	-6.1%	
Total Credit Hours	***300,254.8***	***293,576.8***	***290,883.8***	***290,308.0***	***293,385.5***	***100.0%***	1.1%	-2.3%	

Spring 2018 Enrollment Report – The University of Maine System

Spring 2018 Distance Education Credit Hours by Mode and Degree Level

		Credit Hours	% of Subtotal	% of Total
Distance ITV	**Associate**	264	14.2%	0.4%
	Baccalaureate	1,471	79.2%	2.1%
	Non-Degree Undergraduate	123	6.6%	0.2%
	Subtotal	**1,858**	**100.0%**	**2.7%**
Distance Online	**Associate**	2,276	3.6%	3.3%
	Baccalaureate	50,997	80.1%	73.2%
	Non-Degree Undergraduate	5,025	7.9%	7.2%
	Graduate	4,430	7.0%	6.4%
	Non-Degree Graduate	939	1.5%	1.3%
	Subtotal	**63,666**	**100.0%**	**91.4%**
Distance Onsite	**Associate**	552	19.3%	0.8%
	Baccalaureate	1,211	42.2%	1.7%
	Non-Degree Undergraduate	783	27.3%	1.1%
	Graduate	273	9.5%	0.4%
	Non-Degree Graduate	48	1.7%	0.1%
	Subtotal	**2,867**	**100.0%**	**4.1%**
Distance Video Conference	**Associate**	111	8.6%	0.2%
	Baccalaureate	848	65.5%	1.2%
	Non-Degree Undergraduate	166	12.8%	0.2%
	Graduate	147	11.4%	0.2%
	Non-Degree Graduate	22	1.7%	0.0%
	Subtotal	**1,294**	**100.0%**	**1.9%**
Total Distance Education	**Associate**	3,203	*4.6%*	
	Baccalaureate	54,527	*78.2%*	
	Non-Degree Undergraduate	6,097	*8.7%*	
	Graduate	4,850	*7.0%*	
	Non-Degree Graduate	1,009	*1.4%*	
	Total	***69,685***	***100.0%***	***100.0%***



Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

1. NAME OF ITEM: UMFK Program Suspension

2. INITIATED BY: Gregory G. Johnson, Chair

3. BOARD INFORMATION: **X** **BOARD ACTION:**

4. OUTCOME:
Relevant Academic Programming

BOARD POLICY:
305.4 Academic Program Suspension

5. BACKGROUND:

Pursuant to Board of Trustee Policy 305.4, Academic Program Suspension, the University of Maine at Fort Kent is proposing to suspend offering degrees in Education (elementary and secondary). The program has had very low enrollments and the last full-time faculty member in the program left UMFK last summer. In order to maintain the program and meet State accreditation requirements, UMFK would need to hire three full-time faculty. Given the low program enrollments and the other opportunities within the UMS for students to seek an education degree, it is difficult to justify expending the resources to maintain degrees in Education at UMFK. Thus, beginning Fall, 2018, the University of Maine at Presque Isle will offer the Education degree on the UMFK campus in support of UMFK students interested in pursuing careers in Education.

2/23/18

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

1. NAME OF ITEM: 5-Year Plan to Build Up Engineering in the University of Maine System

2. INITIATED BY: Gregory G. Johnson, Chair

3. BOARD INFORMATION: X **BOARD ACTION:**

4. OUTCOME: **BOARD POLICY:**
Increase Enrollment
Improve Student Success and Completion
Support Maine through Research and Economic Development

5. BACKGROUND:

In February 2017, USM administrators and engineering faculty convened a group of Southern Maine's largest employers of engineers, including Bath Iron Works, Pratt & Whitney, IDEXX, and S. D. Warren. They asked about the companies' current and future workforce needs, and how USM could help meet them. The feedback was clear: **"There is a lack of qualified people."** The employers reported taking months to find the right job candidates and recruiting out-of-state at places such as the Massachusetts Institute of Technology and Northeastern University.

Shortly after this meeting, Maine State Senator Amy Volk presented a draft resolve directing the University of Maine System (UMS) to develop a plan to strengthen engineering-related programs across all UMS campuses, but especially at the University of Southern Maine (USM). Although not voted on by the committee, the Maine legislature's Joint Standing Committee on Education signaled its expectation that UMS follow the spirit of the resolve and develop a plan.

At the same time, the Legislature approved $50 million of financing for a new Engineering Education and Design Center at the University of Maine (UMaine). An additional $30 million is still needed for this project. When combined with increases in engineering faculty, it will expand UMaine's undergraduate engineering capacity by 1,000 students. While this investment is a necessary first step, UMaine's College of Engineering has identified another $70 million in renovations and upgrades needed to extend the life of several engineering education buildings that range in age from 47 to 90 years old and have had no significant upgrades since construction.

PLANNING PROCESS
The engineering faculties at UMaine and USM share a **unified vision** of UMS as a **national leader** in engineering research and education, and a **driver of economic growth** in Maine. To achieve this vision, USM, with the approvals of President Cummings and Chancellor Page, formed a planning committee with representatives of UMaine's College of Engineering. The planning process builds upon the intercampus collaboration documented in 2015 by the Academic

Program Review and Integration Process (APRIP) engineering team. That report described the history of alliance between the two campuses and proposed increasing access by allowing students to start their engineering degree at any UMS campus and easily transfer to UMaine or USM. It also promoted transfers between the two institutions. The Planning Committee met five times over six months to determine how best to strengthen engineering across UMS, but especially at USM. This five-year plan is the result of that partnership. This plan builds on successful initiatives and investments already underway at both institutions, such as Maine Engineering Pathways and the UMaine Engineering Education and Design Center (EEDC).

ELEMENTS OF THE PLAN

The plan details five years of collaborative work between UMaine and USM to grow engineering, System-wide. It includes estimates of initial investments including complementary investments needed to ensure the continued success of UMS's flagship program. The Plan also projects the outcomes over the next decade to create a **truly comprehensive, statewide system of engineering education**. The specifics of the 5-Year Plan include:

- **Increase the number of job-ready engineering undergraduates by 60%** within a decade (1,200 more engineering undergraduates compared to today; 200 students at USM and 1,000 students at UMaine) through expanded as well as new programs at both UMaine and USM;
- **Target the unmet needs of Southern Maine businesses** by building or expanding three new programs at USM: Industrial Engineering, the only program of its kind in northern New England; Engineering Science; and expanding Electrical Engineering to include Computer Engineering;
- Build a robust **K-12 pipeline** of Maine students interested in engineering and ready to succeed at the post-secondary level;
- Expand **pathways for Maine community college students** to easily transition into UMaine's and USM's undergraduate engineering programs; and
- Help more engineering graduates launch their careers in Maine through **internships and co-ops**.

PROJECTED INVESTMENTS

UMaine and USM propose to launch this initiative in the 2019-2020 fiscal year. The projected initial investment over the first five years is $15.9 million. The breakdown by year is shown in the table below. Initial funding will come from multiple sources. Over time higher revenue from tuition derived from student growth will strengthen the finances of both institutions.

Operational Costs	FY19	FY20	FY21	FY22	FY23	Total
New Faculty and Staff at USM	$126,000	$257,000	$371,000	$518,000	$730,000	**$2,002,000**
New Faculty and Staff at UMaine	$417,000	$833,000	$1,250,000	$1,667,000	$2,083,000	**$6,250,000**
Joint K-12 / Community College pipeline	$982,000	$982,000	$982,000	$982,000	$982,000	**$4,910,000**
Joint Expanded Internships and Coops	$560,000	$560,000	$560,000	$560,000	$560,000	**$2,800,000**
TOTAL	**$2,084,000**	**$2,632,000**	**$3,163,000**	**$3,727,000**	**$4,355,000**	**$15,962,000**

Capital investments in the amount of $5,000,000 would be needed to support USM's engineering expansion. At UMaine, investment is needed in the near-term for the EEDC. This project has partial funding of about $50,000,000 from debt service authorized by the legislature and an internal commitment by UMaine. An additional $30,000,000 is needed to complete this project which is now in the design phase. Starting in FY23, this must be followed by a $70,000,000 investment to renovate five existing engineering education buildings.

NEXT STEPS

Following the March 18-19 meeting of the Board of Trustees, the Planning Committee will begin the process of developing an implementation plan. This process will include refining the academic programming, final costing, identification of funding sources, and following each campus' internal procedures for academic and budget planning and approvals. In Summer 2018, the final implementation plan will be submitted for review and approvals to the Chief Academic Officers Council, the Academic and Student Affairs Committee, and the Board of Trustees in that order.

Growing Engineering to Grow Maine's Economy

Five-Year Plan to Build Up Engineering in the University of Maine System

Prepared for the University of Maine System Board of Trustees

By the UMaine-USM Engineering Planning Team with assistance from 45 North Research, LLC

February 2018

Contents

Executive Summary

Professionals in knowledge-intensive fields such as engineering drive economic growth and increase opportunities for all Maine workers. However, the supply of engineers in Maine is growing slower than demand, and over the next decade more than one-quarter (28%) of the state's engineers will reach retirement age. Addressing this impending shortage must be a priority for Maine to continue growing economically.

The University of Maine System (UMS) is uniquely positioned to address this engineering workforce shortage, meeting the needs of both Maine businesses and aspiring Maine students. The engineering faculties of the University of Maine (UMaine) and the University of Southern Maine (USM) share a **unified vision** of UMS as a **national leader** in engineering research and education, and a **driver of economic growth** in Maine.

To achieve this, UMaine and USM propose to:

- **Increase the number of job-ready engineering undergraduates by 60%** within a decade (1,200 more undergraduates enrolled in engineering compared to today) through expanded as well as new programs at both UMaine and USM;
- **Target the unmet needs of Southern Maine businesses** by building or expanding three new programs at USM: Industrial Engineering (creating the only program of its kind in northern New England); Engineering Science; and Electrical and Computer Engineering (an expansion of the existing Electrical Engineering program);
- Build a robust **K-12 pipeline** of Maine students interested in engineering and ready to succeed at the post-secondary level;
- Expand **pathways for Maine community college students** to easily transition into UMaine's and USM's undergraduate engineering programs; and
- Help more engineering graduates launch their careers in Maine through **internships and co-ops**.

Working **together**, UMaine's and USM's engineering programs will meet the needs of Maine businesses, support the aspirations of Maine students, and play a key role in UMS's ongoing efforts to push Maine's economy onto a higher growth path. The total operational cost is estimated at $16 million for the first five years. Initial funding will come from multiple sources. Over time, higher revenue from tuition derived from enrollment growth will strengthen the finances of both institutions. The following table details those costs.

OPERATING COSTS	Year 1	Year 2	Year 3	Year 4	Year 5	Total
New faculty and staff (USM)	$126,000	$257,000	$371,000	$518,000	$730,000	$2,002,000
New faculty and staff (UMaine)	$417,000	$833,000	$1,250,000	$1,667,000	$2,083,000	$6,250,000
K-12/community college pipeline (UMaine and USM)	$982,000	$982,000	$982,000	$982,000	$982,000	$4,910,000
Internships and co-ops (UMaine and USM)	$560,000	$560,000	$560,000	$560,000	$560,000	$2,800,000
TOTAL	$2,084,000	$2,632,000	$3,163,000	$3,727,000	$4,355,000	$15,962,000

In addition to these operating costs, the capital investment needed for USM's expanded academic program offerings is estimated at $5 million. At UMaine, investment is needed in the near-term for the Engineering Education and Design Center (EEDC). This project has partial funding of about $50 million from debt service authorized by the legislature and an internal commitment by UMaine. An additional $30 million is needed to complete this project, which is now in the design phase. Staring in FY23, this must be followed by a $70 million investment to renovate five existing UMaine engineering education buildings.

This plan builds on successful initiatives and investments already underway at both institutions, such as the Maine Engineering Pathways Program and the EEDC. It lays out the complementary investments needed to ensure the continued success of UMS's flagship engineering program at UMaine, and targeted investments in Southern Maine needed to create a **truly comprehensive, statewide system of engineering education.**

Next Steps

Following the March 18-19, 2018 meeting of the UMS Board of Trustees, the Planning Committee will begin the process of developing an implementation plan. This process will include refining the academic programming, final costing, identification of funding sources, and pursuing, as appropriate, each campus's internal procedures for academic and budget planning and approvals. In Summer 2018, the final implementation plan will be submitted for review and approvals to the Chief Academic Officers Council, the Academic and Student Affairs Committee, and the Board of Trustees in that order.

Background

In February 2017, USM administrators and engineering faculty convened a group of Southern Maine's largest employers of engineers, including Bath Iron Works, Pratt & Whitney, IDEXX, and S. D. Warren. They asked about the companies' current and future workforce needs, and how USM could help meet them. The feedback was clear: **"There is a lack of qualified people."** The employers reported taking months to find the right job candidates and recruiting out-of-state at places such as the Massachusetts Institute of Technology (MIT) and Northeastern University.

Several months later, Maine State Senator Amy Volk presented a draft resolve directing UMS to develop a plan to strengthen engineering-related programs across all UMS campuses, but especially at USM (see Appendix J). Although not voted affirmatively out of committee, the Maine legislature's Joint Standing Committee on Education signaled its expectation that UMS follow the spirit of the resolve and develop a plan.

At the same time, the legislature approved $50 million of financing for a new Engineering Education and Design Center at UMaine. An additional $30 million is still needed for this project. When combined with increases in engineering faculty, it will expand UMaine's undergraduate engineering capacity by 1,000 students. While this investment is a necessary first step, UMaine's College of Engineering has identified another $70 million in renovations and upgrades needed to extend the life of several engineering education buildings that range in age from 47 to 90 years old and have had no significant upgrades since construction.

In response to these events, USM formed a planning committee with representatives of UMaine's College of Engineering (see Appendix K). They met five times over six months to determine how best to strengthen engineering across UMS, but especially at USM. This five-year plan is the result of that partnership. It details five years of collaborative work between UMaine and USM to grow engineering system-wide. It includes estimates of the cost of that work for the first five years and it projects the outcomes of the plan over the next decade. It also incorporates the suggestions of industry leaders who provided feedback to an initial draft of the plan in February 2018.

This plan builds on the intercampus collaboration documented in 2015 by the Academic Program Review and Integration Process (APRIP) engineering team, which also included representatives from both UMaine and USM. That report described the history of alliance between the two campuses and proposed increasing access by allowing students to start their engineering degree at any UMS campus and easily transfer to UMaine or USM. It also promoted transfers between the two institutions.

This plan is the logical next step of these activities; it builds on today's intercampus collaborations and legislative support for making UMS's engineering programs even more powerful drivers of economic growth.

Institution Roles

UMaine's and USM's engineering programs each have a unique, vital role to play in creating a truly comprehensive, statewide system of engineering education. Indeed, they believe the only way to achieve this vision is for UMS to have two strong engineering programs working toward coordinated, complementary goals. Together, UMaine and USM propose the following roles:

UMaine's College of Engineering is the heart of UMS's engineering vision and its research powerhouse. It has world-class research facilities, industry ties cultivated over decades, and an outstanding reputation that lets it compete nationally for students, faculty, and research funding. UMaine draws students from across Maine's community college system and every high school in the state. Its nationally recognized K-12 outreach and technical assistance programs have benefited all of Maine.

USM's Department of Engineering is dedicated to meeting the workforce needs of Greater Portland, Maine's largest and fastest growing metropolitan area. It is nimble and responsive. Its location gives it unique access to businesses and place-bound students who otherwise would be unable to study engineering. It cultivates students from Southern Maine Community College and other local sources.

The Big Picture: A Multi-Part Investment Strategy

This plan builds on initiatives and investments already underway at UMaine and USM, including the Maine Engineering Pathways Program and UMaine's Engineering Education and Design Center (EEDC). This plan proposes the next phase of investment to ensure the continued success of UMaine's flagship program and to address specific unmet needs in Southern Maine, thereby creating a **truly comprehensive, statewide system of engineering education.**

UNDERWAY: Maine Engineering Pathways Program

Beginning in Fall 2018, Maine students will be able to take the first year of their engineering education at UMS campuses in Augusta, Bangor, Farmington, Machias, and Presque Isle, plus several outreach centers, and then transfer to UMaine or USM to complete their degrees. The Maine Engineering Pathways Program will be a gateway into engineering for Maine students who want to begin their post-secondary studies close to home.

UNDERWAY: UMaine Engineering Education and Design Center

The design of UMaine's new EEDC is underway. This building, estimated to cost $80 million, will expand UMaine's undergraduate engineering capacity by an additional 1,000 students. The state legislature and UMaine have committed about $50 million to the project. The remainder will be raised from private giving and other sources, including a possible need for additional state bond funding. Design is expected to be completed in late 2019, with construction beginning in early 2020. The center is scheduled to open in 2022.

PENDING: Five-Year Plan to Build-Up Engineering in the UMS

This plan proposes complementary strategies and investments to further expand the pipeline of engineering students in Maine, target the workforce needs of Southern Maine businesses, ensure UMaine's continued success, and make UMS a national leader in connecting students with industry. The table below shows the estimated operational costs for the first five years. They include four new engineering faculty at USM, sixteen new faculty and staff at UMaine, and five years of programming costs for the K-12 pipeline and internships initiatives. The potential cost of additional non-engineering faculty to accommodate increased student enrollment are not included.

OPERATING COSTS	Year 1	Year 2	Year 3	Year 4	Year 5	Total
New faculty and staff (USM)	$126,000	$257,000	$371,000	$518,000	$730,000	$2,002,000
New faculty and staff (UMaine)	$417,000	$833,000	$1,250,000	$1,667,000	$2,083,000	$6,250,000
K-12/community college pipeline (UMaine and USM)	$982,000	$982,000	$982,000	$982,000	$982,000	$4,910,000
Internships and co-ops (UMaine and USM)	$560,000	$560,000	$560,000	$560,000	$560,000	$2,800,000
TOTAL	$2,084,000	$2,632,000	$3,163,000	$3,727,000	$4,355,000	$15,962,000

Revenue projections in Appendix H show how rising student enrollment will generate new tuition revenue that exceeds these costs.

In addition to operating expenses, there is an estimated $30 million of additional funding needed to complete UMaine's EEDC, $70 million needed to renovate five existing UMaine engineering education buildings, and $5 million needed for renovations and upgrades at USM. (There is currently $1.5 million for USM engineering capital needs included in the project list associated with a potential General Obligation bond being considered in the Maine legislature, unrelated to this plan).

CAPITAL COSTS	
UMAINE	
Additional capital to complete EEDC	$30,000,000
Renovation of five existing buildings	$70,000,000
USM	$5,000,000
TOTAL	**$105,000,000**

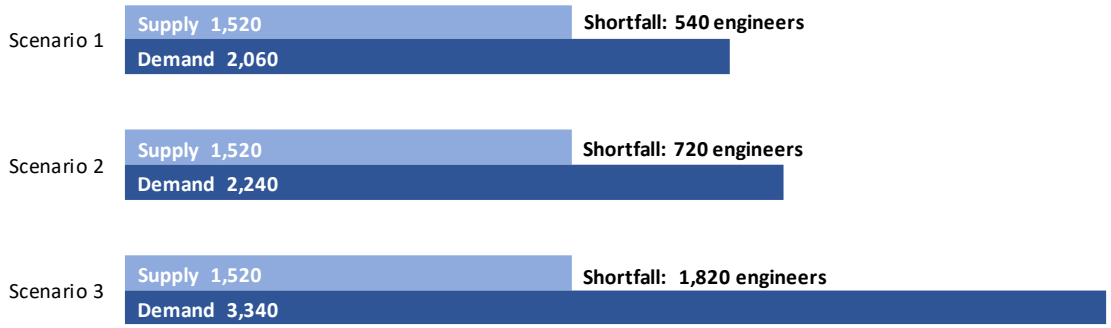
Maine Needs Engineers

The UMaine-USM engineering team began by assessing the current and future demand for engineers in Maine. Its research confirmed reports by Maine businesses of shortages across many disciplines. It also revealed engineering's unique potential to drive economic growth and increase opportunities for all Maine workers.

Projections

Appendix A contains detailed projections of Maine's need for engineers. The overall picture suggests the current supply of engineers is insufficient to meet future demand. Two forces contribute to the imbalance: the aging of Maine's engineering workforce and the growth of the profession. Census data indicate that 28% of Maine engineers are age 55 and older, meaning they will become eligible to retire in the next ten years. At the same time, recent job-posting data suggests the demand for engineers is growing faster than previously projected. Taken together, even conservative scenarios suggest Maine's engineering shortfall could range from 540 to 1,820 over the next decade (below). Looking regionally, New England is projected to have almost 40,000 job openings for engineers over the coming decade.

All projection scenarios show a shortage of engineers in Maine in next ten years.



Source: 45 North Research. See Appendix __ for detail and methodology.

Projected shortages are particularly high in four engineering disciplines: civil, mechanical, industrial, and electrical. Of these, industrial engineering stands out as having the highest unmet demand. The U.S. Department of Labor projects 450 annual openings in that field throughout New England, more than double the annual number of degrees awarded (211 in 2014-2015). This creates a potential opportunity for UMS because there are just seven industrial engineering programs in New England, none of which are in Maine, Vermont, or New Hampshire (by comparison, there are 29 mechanical and 21 civil engineering programs in New England).

Role of Engineers in Economic Development

Maine's need for engineers is twofold. The above projections show the need generated by the field's steady expansion and the state's aging workforce. Maine's other need is for economic

development. This plan proposes increasing UMS's engineering capacity to push the state onto a higher growth path.

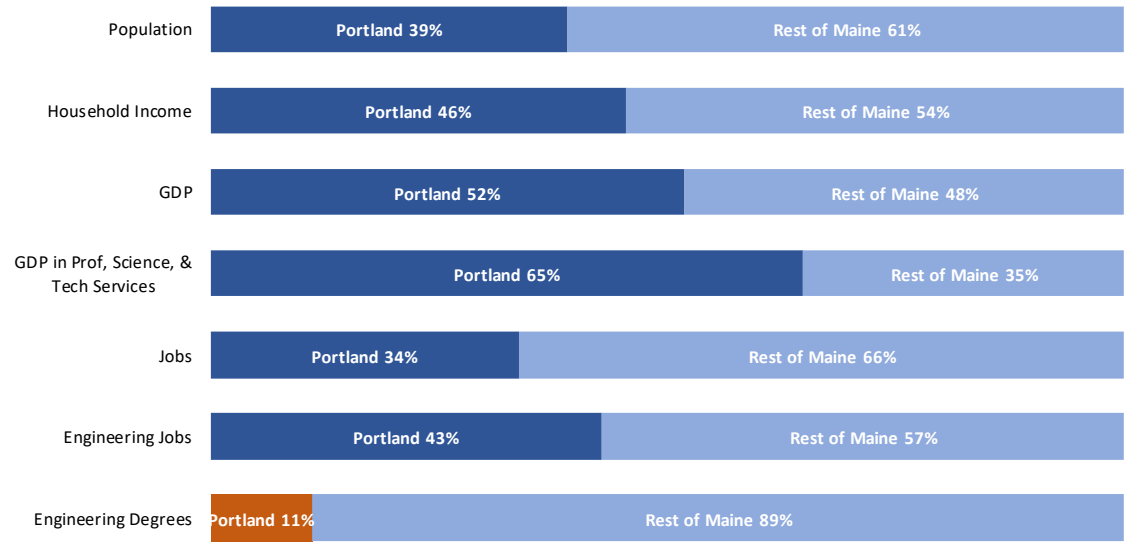
A large body of academic research suggests that having a higher share of professionals in knowledge-intensive fields such as engineering can drive economic growth. UMaine economist Todd Gabe recently published an extensive analysis of the factors that have influenced the growth of U.S. cities and states since 1990 [Gabe, T. M. (2017). *The Pursuit of Economic Development: Growing Good Jobs in US Cities and States*. Springer.] Gabe finds that having a critical mass of professionals with specialized skills and knowledge in certain fields generates benefits that ripple through the broader economy. Writing about these "high-knowledge" fields such as engineering, Gabe finds, "…[P]eople with knowledge about these topics are rewarded in the labor market (i.e., private returns to human capital) and their activities improve the productivity of others around them (i.e., human capital externalities)." (Gabe, 2017, p. 99). In other words, there are social, as well as private returns to increasing educational attainment in fields such as engineering. **Maine needs engineers not just to replace retiring Baby Boomers but to increase the productivity of its entire workforce.**

Role of Southern Maine in Economic Development

Southern Maine businesses that employ engineers have repeatedly expressed to USM their need for more workers; their inability to find them may be affecting the pace of growth in the region. That has implications for all of Maine. Greater Portland is Maine's urban economic engine, generating over half of the state's gross domestic product (GDP). By nearly every measure, this geographically small region generates an outsized amount of activity. The chart below shows the economic size of the Portland-South Portland Metropolitan Statistical Area (MSA) by several measures, including population, jobs, and income.

Two measures highlight the level of engineering activity in Greater Portland. GDP from engineering establishments alone is not available (and does not include the contributions of engineers in other industries) but is available for professional, scientific, and technical services, where 40% of engineers work. The table below shows that two-thirds (65%) of Maine's activity in that broad industry occurs in Greater Portland. Additionally, **43% of engineering jobs are in Greater Portland and just 11% of engineering degrees are awarded there**.

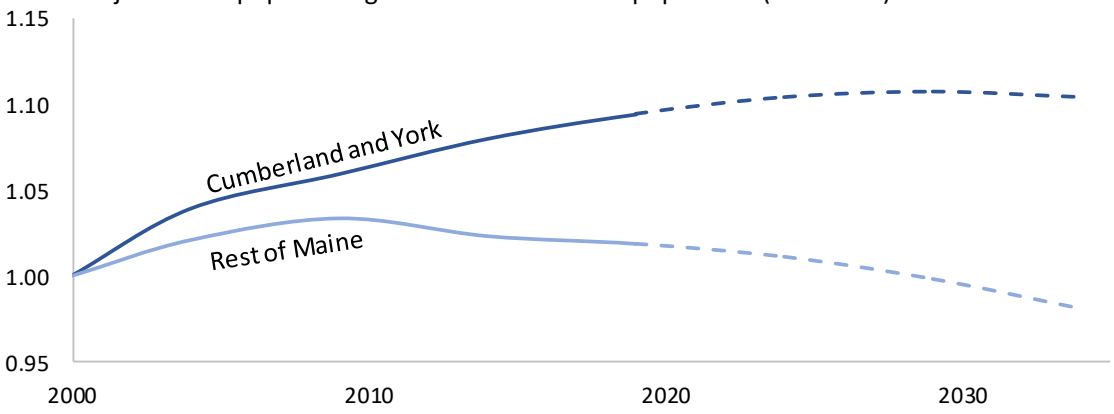
Greater Portland has a large share of Maine's economy and a small share of engineering degrees.



Sources: U.S. Census Bureau, American Community Survey, 2011-2015 five-year average population for Maine and Portland-South Portland MSA); U.S. Bureau of Economic Analysis, Personal Income (2015) and Gross Domestic Product (2016) for Maine and Portland-South Portland MSA; U.S. Bureau of Labor Statistics, Occupational Employment Statistics jobs by occupation in Maine and Portland-South Portland MSA (May 2016); National Center for Education Statistics, engineering bachelor's and graduate degrees conferred (2015-2016)

Greater Portland's contribution to Maine's economy is becoming more critical as other regions face population decline and the loss of traditional industries. The State of Maine's current population projections show Cumberland and York counties growing 2.2% from 2014 to 2034 and the rest of Maine declining 4.2%.[1]

The populations of Cumberland and York counties are growing; Maine's population is falling.
Projections of population growth indexed to 2000 population (2000=1.00)

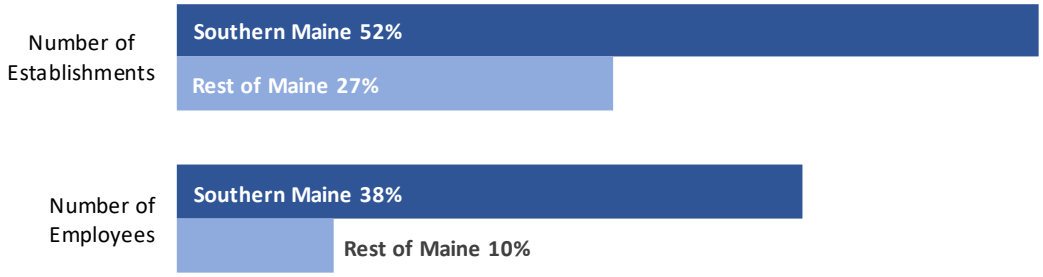


Source: U.S. Census Bureau (historical estimates); Maine Office of Policy and Management (projections)

[1] State of Maine, Office of Policy and Management, population projections through 2034, released November 2016.

Diving deeper into engineering, we find that both the number of engineering establishments in Southern Maine (defined as Cumberland and York counties) and the number of people they employ is growing faster than elsewhere in the state.[2] This finding illustrates both the trajectory of the Southern Maine economy and how a critical mass of high-knowledge professionals can spur economic growth.

Engineering establishments are growing faster in Southern Maine than in the rest of the state.
Percentage growth from 2001 to 2016



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, "Southern Maine" is Cumberland and York counties

Overall, these statistics suggest there is a strong need for engineering in Maine, that it is concentrated in the southern part of the state, and that increasing the number of professionals in this field could benefit the broader Maine economy.

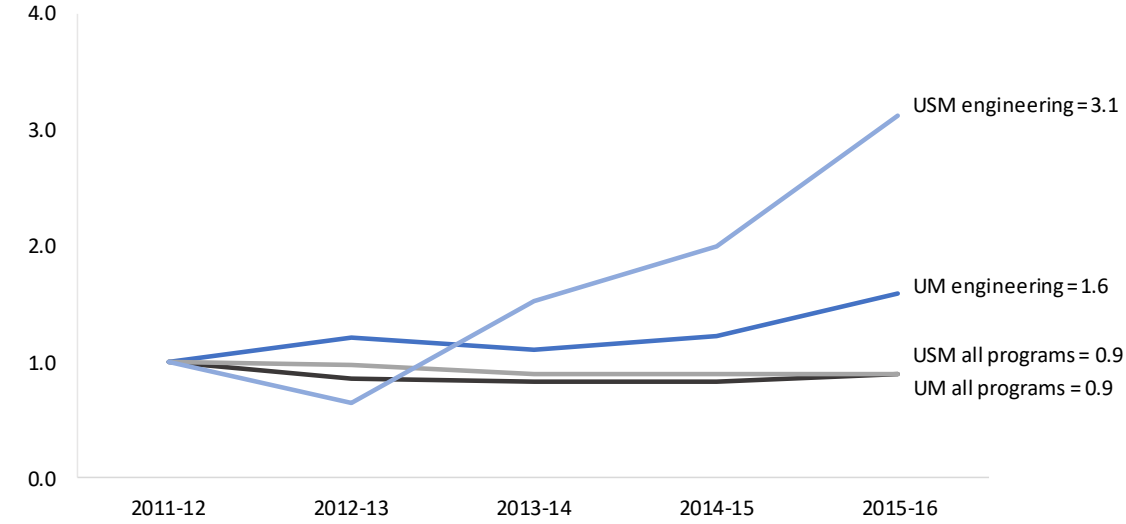
Student Demand

Enrollment trends show rising interest in engineering among undergraduates at UMaine and USM. From 2011-12 to 2015-16, the number of engineering bachelor's degrees awarded by these institutions increased 60% and 210% respectively, even as the total bachelor's degrees at both institutions fell 10%.[3] High growth at USM highlights the extent of unmet need for engineering education in Southern Maine. In this new market, serving mostly place-bound students, USM's growth appears to be complementing, rather than competing with UMaine. UMaine's engineering program has continued to grow even as USM expands. In fact, because of its limited space, UMaine's College of Engineering has had to limit enrollment in its most popular programs for the past three years due to capacity constraints.

[2] These statistics include only engineering firms. They do not include engineers working at companies in other industries, such as manufacturing.

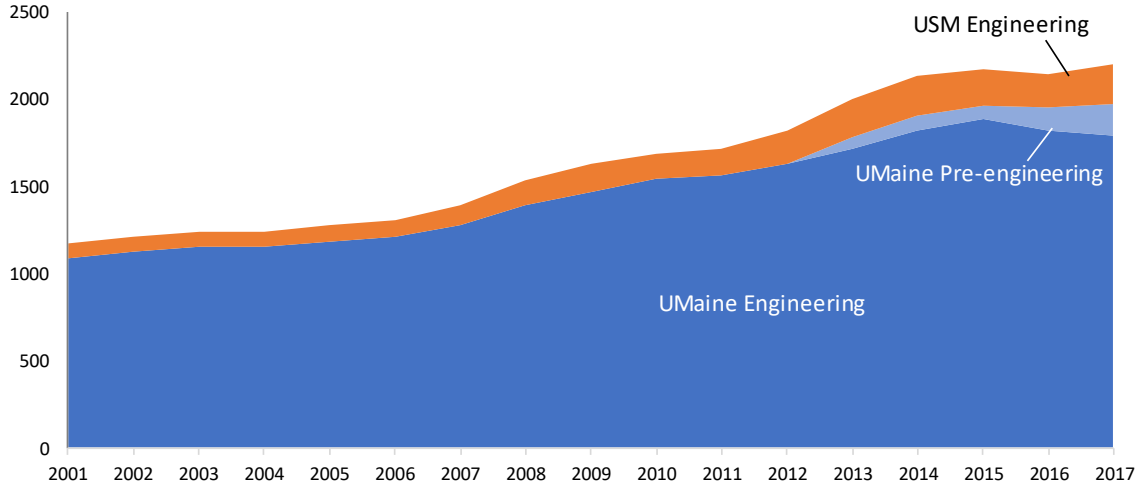
[3] National Center for Education Statistics, Integrated Postsecondary Education Data System, accessed 11/15/17. First-major bachelor's degrees awarded by program. USM awarded 17 engineering bachelor's degrees in 2011-2012 and 53 in 2015-2016. UMaine awarded 161 engineering bachelor's degrees in 2011-2012 and 255 in 2015-2016.

The number of engineering bachelor's degrees awarded by UM and USM is rising; growth is outpacing other programs.
The chart below shows the indexed growth rate of bachelor's degrees by program area (2011-12 = 1.0).



Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, degrees by first major

Enrollment in engineering programs at UMaine and USM is growing.
Note: UMaine had to cap enrollment in four popular programs in 2016 and 2017.



Source: UMaine and USM

Outreach to Maine high school students could further increase the number pursuing engineering degrees in the UMS, creating a greater pool of applicants for both UMaine and USM. In 2016, UMaine and USM were the 1st and 3rd highest recipients of SAT scores from Maine high school seniors, but other top recipients included Worcester Polytechnic Institute (16), Wentworth Institute of Technology (22), Rensselaer Polytechnic Institute (28), the

Massachusetts Institute of Technology (38), and Rochester Institute of Technology (40).[4] While the intended major of these students in unavailable, it is likely that students applying to those out-of-state institutions were interested in engineering or an engineering-related field. Increasing outreach to Maine high schools through programming and networking, as recommended in this plan, could further increase the number of students selecting UMaine and USM for their engineering education.

[4] The College Board, "2016 College-Bound Seniors State Profile Report: Maine," 2016.

Five-Year Plan

Summary

UMaine and USM propose **strategic, coordinated investments** to meet Maine's engineering workforce needs. This plan proposes four initiatives to magnify the impact of current investments and create a truly comprehensive, statewide system of engineering education: ensure the continued success and growth of UMaine's nationally recognized engineering program; grow USM's capacity to address the specific needs of Southern Maine businesses; expand Maine's K-12 and community college engineering pipeline; and integrate more real-world experiences into the training of new engineers through internships and co-ops.

While this is a five-year plan, its full impact will unfold over about ten years. The following table shows the estimated ten-year cumulative impact of these proposed and ongoing investments. Projections show that new revenue from tuition and other sources significantly exceed operational expenses over the next decade. For more details, see the "Enrollment and Budget Projections" section and Appendix H.

Estimated Ten-Year Cumulative Operating Revenue and Expenses

	UMAINE	USM
NEW UNDERGRAD ENGINEERING STUDENTS	5,500	1,100
NEW TUITION REVENUE	$127.6 million	$10.0 million
NEW FACULTY	45	8
NEW PERSONNEL EXPENSES	$55.6 million	$8.1 million
TOTAL AVAILABLE FOR INVESTMENT (REVENUE MINUS EXPENSES)	$72.0 million	$1.9 million

Capital improvements at both UMaine and USM are critical to the full implementation at this plan. Today, there is no mechanism for on-going state financial support for capital expenditures except through voter-approved bonds or other one-time funding. This makes funding the infrastructure investments associated with this plan, as well as the UMS as a whole, challenging. It further suggests that the current discussion in the legislature of a general obligation bond may play a potentially important role in this plan.

UMaine: Building on Success

The UMaine College of Engineering currently offers eleven bachelor's degrees, eight master's degrees, and four PhD degrees, and enrolls approximately 2,000 undergraduate and graduate students. Faculty positions are being added to permit growth of the program. Continued growth will require additional faculty positions. However, the primary constraint to growth is now lack of adequate facilities. As faculty and facility needs are addressed, UMaine will continue to add capacity in existing programs and offer additional programs to respond to student demand and the changing needs of the businesses and institutions who employ

engineers. With the following infrastructure investments, UMaine projects that its undergraduate student body will grow by 1,000 over a ten-year period, and eventually generate over $21 million net revenue annually compared to today.

Capital Investment

Undergraduate enrollment in the UMaine College of Engineering has grown from 1,088 in 2001 to 1,800 in the fall of 2017, an increase of more than 65%. In addition, enrollment in its Pre-Engineering program has grown from zero in 2012 to 181 in Fall 2017. This growth is despite the fact that for the last three years enrollment in UMaine's most popular engineering programs has been curtailed due to lack of space and faculty. UMaine has begun to address the latter need by hiring ten additional faculty members in the last two years. This leaves lack of facilities as the major impediment to growth.

Design of a new Engineering Education and Design Center (EEDC) is underway. This building is envisioned to be up to 113,000 square feet with an estimated cost of $80 million. In July 2017, the state legislature approved $50 million in debt service, yielding $43 million in spendable money for the building. UMaine has committed $5 million to the project, bringing the total currently available to $48 million. As of February 2018, approximately $1 million has been raised through private fundraising. An additional $10 million of bond funding is essential to completing this project in a timely manner. The remaining balance will be raised from private giving and other sources. In December 2017, the team of WBRC Architects/Engineers, headquartered in Bangor, and Boston-based Ellenzweig were hired to begin design. Groundbreaking is targeted for early 2020 with completion in 2022. This project, coupled with continued increases in engineering faculty, will expand UMaine's undergraduate engineering capacity by an additional 1,000 students.

After completion of the EEDC, five existing engineering education buildings at UMaine require renovation, including Boardman Hall, Barrows Hall, Jenness Hall, Crosby Laboratory, and Machine Tool Laboratory. These buildings range in age from 47 to 90 years old and have had no significant upgrades since construction. Their key heating and electrical systems are beyond the end of their useful life. Major upgrades are needed to improve energy efficiently, such as replacement of single pane, wood-framed windows with double pane windows. Classrooms and laboratories need to be reconfigured to meet modern educational standards. These estimated to cost of these upgrades is $70 million.

Outcomes

The above investments will generate the following outcomes:

- UMaine's enrollment will grow by **1,000 engineering undergraduates** within a decade, growing its program by more than 50%, from 1,800 undergraduates today to approximately 2,800 within a decade.
- **The state's engineering workforce will increase significantly**, allowing Maine businesses to reduce out-of-state recruitment, fill more job openings, and expand their Maine-based operations.

- **Student and faculty research and development efforts will increase,** resulting in new technologies that will further drive economic growth in Maine.

USM: Targeting Southern Maine's Workforce Shortage

USM's location near many of the state's largest employers of engineers makes it uniquely suited to help address the industry's workforce shortage. It can help the place-bound employees of these firms acquire new skills and it can coordinate high-quality internships and co-ops that help both students and businesses.

To realize these opportunities, USM will build or expand three degree programs - Industrial Engineering, Electrical and Computer Engineering, and Engineering Science - and explore growth of a fourth: Biomedical Engineering. USM will seek accreditation for all new programs from the Accreditation Board for Engineering and Technology (ABET).

These programs will allow USM to increase its undergraduate enrollment by 200 over ten years. Consistent with its focus on Greater Portland, USM will tailor these programs to the needs of local businesses and workers. This will require USM to work closely with local employers of engineers. It will also require USM to design programs that increase access to engineering education for non-traditional students, such as incumbent workers and new Americans.

Industrial Engineering is a field with a particularly high unmet need in New England. Industrial engineers focus on efficiency in production and design processes that connect workers, materials, technology, and information in cost-effective and sophisticated ways. They are versatile engineers with the ability to work in a variety of industries. Maine industry leaders say they highly value the skills of industrial engineers and some report strong demand in their sectors, although not as high as for electrical and mechanical engineers. The Maine Manufacturers Association reports that the most common request they receive for consulting services is for industrial engineers. This demand may grow as new companies build new processing facilities and as sectors outside of manufacturing, such as health care or food retail, seek greater efficiency in their systems. USM will monitor and evaluate the demand for industrial engineers among Southern Maine businesses as it builds this program.

The U.S. Department of Labor projects 450 annual openings in the field in New England, more than double the annual number of degrees awarded (which was 211 in 2014-2015). There are just seven industrial engineering programs in New England (compared to 29 mechanical and 21 civil engineering programs), none of which are in the Northern New England states of Maine, Vermont, and New Hampshire. (See Appendix B for a review of regional engineering programs.)

The curriculum for an industrial engineering program fits well with USM's existing electrical and mechanical programs, making the addition relatively cost efficient.

Next, USM will change its B.S. in Electrical Engineering to a B.S. in **Electrical and Computer Engineering**. This change recognizes the synergy between electrical and computer engineering, the national and local demand for computer engineers, and the breadth of computer engineering courses already offered at USM. This change will require one additional tenure-track faculty member in computer engineering to accommodate increased enrollment. Maine

industry leaders have also expressed need for software engineers, which USM will keep in mind at it designs this new program.

USM will also create a B.S. degree in **Engineering Science** for students who want a foundation in engineering before pursing graduate studies in education, business, medicine, or law. This new program will leverage existing courses in engineering, biology, chemistry, and physics; it will not require any new courses or faculty. Engineering Science will play an important role in increasing the diversity of students entering USM's engineering program and the industry.

Finally, USM will continue exploring a **Biomedical Engineering** program offered in partnership with UMaine. Both institutions recognize the importance of this growing field and are committed to exploring innovative ways to increase access to this degree in Maine. UMaine has proposed a joint program offered at both locations. UMaine and USM looks forward to continued discussions about this collaborative approach.

Capital Investment

For USM to achieve the financial projections associated with adding programs in Industrial Engineering and Engineering Science, and expanding Electrical Engineering to include Computer Engineering, a capital investment of roughly $5 million is needed. This investment will fund capital improvements to renovate and upgrade the John Mitchell Center (JMC) to house all engineering programs and to accommodate more students and faculty. Renovations, upgrades, and equipment purchases will include the following, at a cost of $3.5 million:

- "Smart" classroom (JMC 252)
- "Remote/Streaming" classroom (bidirectional) (JMC 217).
- Computer/simulation laboratory (JMC 265)
- Computer classroom (JMC 270)
- Electrical and computer engineering laboratory (JMC 184)
- Microprocessors/embedded systems/networks laboratory (JMC 241)
- Machine shop, "Skunks Works" prototyping laboratory, technology sandbox (JMC 173/183/185)

In addition, USM's Department of Technology will need to be relocated at an estimated cost of $1.5 million. The total capital expenses required for USM of $5 million lays the foundation for increased revenue that fully offsets additional personnel costs. (There is currently $1.5 million for USM engineering capital needs included in the project list associated with a potential General Obligation bond being considered in the Maine legislature, unrelated to this plan).

Outcomes

The above investment will generate the following outcomes:

- USM's enrollment will grow by **200 engineering undergraduates** within a decade, nearly doubling its program from 232 students in 2018 to approximately 432 in 2028.

- The **number of engineering degrees offered at USM will double** from two to four: Industrial Engineering, Electrical and Computer Engineering, Mechanical Engineering, and Engineering Science.
- USM will attract more **out-of-state students** in part by offering the only industrial engineering bachelor's degree program in Northern New England, increasing out-of-state enrollment from 29 students today to a projected 62 within a decade.
- USM will significantly **increase the supply of engineers to Southern Maine businesses**, allowing these businesses to reduce out-of-state recruitment, fill more job openings, and expand their Maine-based operations.
- USM will continue discussing innovative ways to offer **Biomedical Engineering** in Southern Maine in partnership with UMaine, eventually expanding UMS's presence in this growing field.

K-12 and Community College Pipeline

Increasing the number of Maine college students pursing engineering degrees requires increasing the number of Maine high school graduates interested in, and prepared for, the field. This in turn requires more K-12 teachers versed in engineering. UMaine and USM support developing a strong K-12 engineering pipeline that increases interest and competency in science, technology, engineering, and mathematics (STEM), especially among female and underserved rural and minority students. This will build on the UMaine-led National Science Foundation EPSCOR and INCLUDES projects that are already working with twelve high schools in Maine and five high schools in other states.[5]

Today, there are several grand challenges in K-12 engineering education, including: (1) early exposure to engineering and creative problem solving, (2) teacher training, (3) exposing teachers and students to real-world engineering practices, (4) curriculum development, and (5) integrating training opportunities at higher education institutions and industries. UMaine and USM propose the following strategies to address these challenges in Maine (see Appendix G for more detail).

Strategy 1: INSPIRE (Outreach to K-12 schools)

The goal of this strategy is to inspire Maine students to become engineers by introducing them to the creativity and innovation inherent in engineering, and increasing their knowledge of engineering principles and professions. This will be achieved through coordinated, statewide outreach by Maine's post-secondary engineering programs that builds on existing initiatives, such as Engineering Expo, tours of UMS engineering facilities, and tours of engineering companies.

[5] Lori Valigra, 9/13/16, "UMaine one of 37 nationwide STEM projects to get NSF grant," MaineBiz.

Strategy 2: ENGAGE (Equip K-12 schools)

This strategy seeks to engage K-12 students in hands-on learning with 3D printers installed at every K-12 school in Maine through a collaborative effort between Maine's post-secondary engineering and education programs, the Maine Department of Education, and K-12 schools. A pilot study will be conducted to train teachers and students from 60 schools in a newly designed engineering module centered around 3D printing. Specific teacher training needs and curriculum will be identified and developed, and the program will expand until every Maine school has trained teachers and grade-appropriate curriculum to support 3D printing and student innovation.

Strategy 3: PREPARE (Educate K-12 teachers)

Improving engineering knowledge among K-12 teachers will improve Maine students' overall STEM proficiency and encourage more of them to seek professions in these fields.

UMaine and USM propose creating four post-secondary credential programs to increase engineering literacy among Maine's K-12 educators:

- 4+1 Engineering/Education B.S./M.S. that pairs engineering education with teacher training
- Certificate in Education for practicing engineers interested in entering K-12 education
- Certificate in Engineering Education for current teachers
- Minor in Engineering for graduates of other disciplines (e.g. science or math) to learn about engineering while pursuing an M.S. in education

By creating four pathways for aspiring engineering educators, UMaine and USM seek to foster a cadre of teachers with demonstrated knowledge of both engineering and education. The Maine Department of Education's *Statewide Strategic Plan for STEM*, released in 2010, calls for eight regional STEM coordinators and research centers to increase student achievement. Graduates of the above programs would be well-suited to fill those roles and others.

Strategy 4: ENABLE (Engineering teaching certificate)

Building on the credentials outlined above, UMaine and USM will work with the Maine Department of Education to develop a teaching certificate that enables engineering professionals to teach in K-12 schools. The real-world knowledge and experiences these individuals bring into the classroom are invaluable tools to inspire, engage, and inform students about engineering.

Strategy 5: SUPPORT (Community colleges pathways)

Maine's community colleges can be gateways for students from diverse backgrounds to enter the engineering field. These institutions can foster their interest and prepare them to enter a bachelor's degree program with a solid academic foundation. To build this pathway, UMaine and USM will partner with Maine's community colleges to develop instructional modules and courses tailored to their students' needs and interests, likely incorporating both on-line and on-

site components. Collaborative A.A./B.S. programs will allow students to transition easily from community college into bachelor's degree programs at UMaine and USM.

Strategy 6: PRE-ENGINEERING high school programs

UMaine and USM will work together to build an immersive, summer pre-engineering ("Step Up") program with local school districts to further increase the pipeline of engineering students, particularly in Southern Maine. This residential program will offer a specialized, innovative, interdisciplinary curriculum in engineering, science, and mathematics designed to improve students' competence in these fields. The program will also seek to engage parents so that they see the opportunity that engineering holds for their children.

The curriculum will consist of industry-defined engineering applications in multiple fields. A key component of the program will be hands-on activities and inquiry-based exploration, an approach proven to enhance students' enthusiasm for engineering, science, and mathematics. Math and engineering concepts will be reinforced and used to analyze and interpret the data obtained from the research projects. Students will also learn scientific writing and oral presentations skills. Having increased students' competence and interest in engineering, science and mathematics, the program will encourage students to pursue engineering careers by connecting them with role models and mentors in engineering-related fields, and increasing their awareness of exciting opportunities for postsecondary education and engineering related careers. Students also will participate in sessions on leadership development, interview skills, and resume writing.

This initiative will increase interest among the many place-bound students in Southern Maine. Growing the number of Maine students pursuing engineering degrees will ensure there are enough students to fill programs at both UMaine and USM, even as demographic trends shrink the overall number of high school graduates. Required resources will include a program coordinator, administrative support, operating funds, and scholarships for participating students. Corporate sponsorships will be sought to partially support program expenses.

Timeline and Investment

UMaine and USM propose launching this initiative as soon as funds become available. The estimated cost of the above activities is $982,000 per year for staff coordinators, faculty training and program development, technical assistance, and equipment; costs that over time will be offset by corporate sponsorships, grants, and other institutional revenue sources.

	ANNUAL COST
K-12 OUTREACH MANAGER	$100,000
PRE-ENGINEERING SUMMER PROGRAM COORDINATOR (ALSO SERVES AS USM LIAISON WITH K-12 OUTREACH MANAGER)	$80,000
TECHNICIAN	$90,000
FACULTY FOR TRAINING AND PROGRAM DEVELOPMENT	$270,000
FACULTY SUMMER SALARIES	$22,000

PRE-ENGINEERING SUMMER PROGRAM OPERATING FUNDS AND STUDENT SCHOLARSHIPS	$250,000
GRADUATE STUDENTS	$50,000
UNDERGRADUATE STUDENTS	$40,000
3D PRINTERS (60)	$30,000
PROGRAM EXPENSES	$50,000
TOTAL	**$982,000**

Outcomes

The above investment will achieve the following outcomes over ten years:

- Every Maine high school graduate will be "engineering literate" – fluent in basic principles and aware of the high-quality careers available in engineering.
- Five hundred K-12 teachers will be specially trained to lead their school districts in developing STEM programs.
- There will be a vibrant pre-engineering high school pathways program in partnership with local school districts.
- The percentage of Maine high school seniors pursuing engineering (reported on the SAT) will consistently exceed the national average.
- Transfers from the Maine Community College System into engineering programs at UMaine and USM will increase.

Internships and Co-ops

UMaine and USM already are providing many undergraduates with real-world experiences in their field of study. Through internships, students can work either full- or part-time for an employer while continuing their studies. Internships can be paid or unpaid, and can occur in summer or during the academic year. Co-ops allow students to temporarily stop taking classes while working full-time for an employer. Both co-ops and internships create invaluable opportunities for students to gain professional skills and learn about their field of interest.

At UMaine, approximately 80% of engineering students have at least one internship, co-op, or major research experience prior to graduation. UMaine has longstanding relationships with a wide range of partners including Bath Iron Works, Pratt & Whitney, Texas Instruments, General Electric, IDEXX, Maine Medical Center, TRC, Woodard and Curran, and the Maine Department of Transportation. Each year over 100 companies and agencies seek UMaine undergraduate engineers for these opportunities.

USM also leverages its ties with local employers to create opportunities for students. Each year on average, over 30 third- and fourth-year USM engineering students intern with local

businesses. Often, these experiences lead to employment. In the past three years alone, 55 companies have employed one or more of USM's engineering interns. Portsmouth Naval Shipyard, IDEXX, Lanco, Texas Instruments, and Pratt and Whitney are among the Southern Maine businesses with the largest number of interns from USM's engineering programs.

Engineering faculty at both institutions recognize the importance of these experiences in fostering understanding of modern technology and practices, developing professional skills, networking, and increasing employability. Indeed, many engineering students are already having these experiences through internships, co-ops, and research projects. This component of the growth plan makes them universal, ensuring that every UMS engineering undergraduate has at least one real-world work experience prior to graduation. Industry feedback reinforced the need for students to receive instruction on the "soft" skills required in a professional work environment, and for UMaine and USM to create a clear, streamlined process that makes finding and hiring a qualified student easy for businesses.

USM and UMaine will work collaboratively to build their respective internship and co-op programs in complementary ways to avoid duplication, using Innovate for Maine Fellows program as a model. USM's short-term focus will be improving its systems for coordinating, monitoring, and evaluating internships as it seeks to expand student opportunities in Southern Maine. USM's medium-term focus will be engineering co-ops in Southern Maine. This plan calls for engineering internship coordinators as USM and UMaine to help expand engineering internships through partnerships between UMS and the Southern Maine businesses that employ engineers. It also calls for financial support for student stipends to pay for their internships. A sliding scale model will be developed to ensure businesses pay their fair share of student stipends and accommodate those businesses that want interns but financially are unable to fully or partially support students.

Timeline and Investment

UMaine and USM propose launching this initiative as soon as funds become available. The estimated cost of the above activities is $560,000 per year for staff coordinators, operating funds, faculty and student training and program development, and student stipends.

	ANNUAL COST
TWO INTERNSHIP COORDINATORS	$160,000
FACULTY AND STUDENT TRAINING AND PROGRAM DEVELOPMENT	$100,000
STUDENT STIPENDS	$200,000
PROGRAM EXPENSES	$100,000
TOTAL	**$560,000**

Outcomes

- All UMS engineering graduates will have at least one real-world work experience that gives them the professional skills to succeed in a modern workplace, contacts within the industry, and firsthand understanding of modern engineering practices.
- UMS will be a national leader in connecting students with industry and integrating real-world experiences into academic programs.

Enrollment and Budget Projections

The initiatives described above – additional engineering programs, the K-12 and community college pipeline, internships, and co-ops – are new undertakings proposed by UMaine and USM in this five-year plan. In addition, UMaine and USM will continue growing existing programs and pursuing new opportunities as they arise. UMaine and USM project that these new and existing initiatives together will increase enrollment at both campuses and attract new tuition revenue that more than covers new personnel costs. The projections below (and in Appendix H) are intended to illustrate the additional revenue and costs that result from the full implementation of the five-year plan, and from additional capital expenditures at UMaine. They are dependent on substantial funding from the State of Maine for capital expenses as well as funding from a multitude of sources for operational expenses. While the timeline may shift depending on when funding is realized, the projections show that the additional revenue from more students and tuition significantly exceeds the associated operational costs over a ten-year period.

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
UNIVERSITY OF MAINE											
Total enrollment	1,819	1,919	2,019	2,119	2,219	2,319	2,419	2,519	2,619	2,719	2,819
New tuition revenue	---	$2,928,348	$6,197,794	$8,296,985	$10,018,263	$11,790,524	$13,665,155	$15,595,017	$17,580,112	$19,678,198	$21,835,765
New personnel costs	---	$781,881	$1,959,566	$2,803,179	$3,877,061	$4,720,788	$5,863,540	$6,992,045	$8,270,835	$9,349,485	$10,963,918
Total available for investment	---	$2,146,467	$4,238,228	$5,493,806	$6,141,202	$7,069,736	$7,801,615	$8,602,972	$9,309,277	$10,328,713	$10,871,847
UNIVERSITY OF SOUTHERN MAINE											
Total enrollment	232	252	272	292	312	332	352	372	392	412	432
New tuition revenue	---	$139,880	$284,046	$432,498	$712,096	$885,832	$1,064,888	$1,249,264	$1,548,892	$1,751,709	$1,968,595
New personnel costs	---	$125,697	$257,146	$370,732	$518,398	$730,024	$1,021,855	$1,055,772	$1,243,576	$1,284,645	$1,489,772
Total available for investment	---	$14,183	$26,900	$61,766	$193,698	$155,808	$43,033	$193,492	$305,316	$467,064	$478,823

Outcomes

This *Five-Year Plan to Build Up Engineering in the UMS* will achieve the following outcomes over the next decade:

The Maine Economy

- Maine's supply of **new engineers** will grow dramatically, allowing businesses to reduce out-of-state recruitment, fill more job openings, and expand their Maine-based operations.
- A higher-skilled workforce will push Maine onto a **higher growth** path.

The University of Maine System

- UMaine and USM will have an even **stronger partnership** built on mutual support and collaboration.
- Enrollment in UMS's engineering programs will increase 60%, including almost **doubling at USM**, from 232 today to 432 within a decade, and **increasing more than 50% at UMaine**, from 1,800 today to 2,800 within a decade. New degree programs and concentrations at both institutions will bolster this growth.
- USM will attract **more out-of-state students** in part by offering the only **Industrial Engineering** undergraduate program in Northern New England, increasing out-of-state enrollment from 29 today to 62 in ten years.
- USM and UMaine will continue discussing innovative ways to offer **Biomedical Engineering** in Southern Maine, eventually expanding UMS's presence in this growing field.
- Maine people will see **UMS as the gateway** to well-paying careers in engineering.

K-12 and Community College Pipeline

- Every Maine high school graduate will be **"engineering literate"** – fluent in basic principles and aware of the high-quality careers available in engineering.
- Five hundred **K-12 teachers** will be specially trained to lead their school districts in developing STEM programs.
- There will be vibrant **pre-engineering high school pathways** in partnership with local school districts.
- The percentage of Maine **high school seniors** pursuing engineering will consistently exceed the national average.
- Transfers from the **Maine Community College System** into engineering programs at UMaine and USM will increase.

Real World Experience and Employment

- Through **internships and co-ops**, all UMS engineering graduates will have at least one **real-world work experience** that gives them the **professional skills** to succeed in a

modern workplace, **contacts** within the industry, and firsthand **understanding** of modern engineering practices.

- UMS will be a **national leader** in connecting students with industry and integrating real-world experiences into academic programs.

Appendix A: Market Demand Assessment

This appendix addresses three questions:

⇒ *What is the demand for engineers in Maine and New England today, and over the next 10 years?*

⇒ *How many engineers are Maine and New England universities graduating?*

⇒ *What engineering disciplines will be most in demand?*

Maine's labor market for engineers is complex, and multiple data sources are required to assess real-time demand for engineers. This market demand analysis uses four data sources, each with strengths and weaknesses: the Bureau of Labor Statistics (BLS) Occupational Employment Statistics provides data on the number of engineers currently working in Maine; BLS Employment Projections forecast the number of job openings for engineers over the next ten years; Burning Glass Technologies complements the BLS jobs data with the number of online job postings for engineers; and the National Center for Education Statistics provides the number of post-secondary degree completions by institution and major. The picture that emerges is one in which the supply of engineers is generally insufficient to meet demand, with shortages varying significantly between specific occupations.

1. Engineering Jobs

In 2016, there were approximately 6,600 engineers working in Maine. Within the engineering field, civil engineers are the most common (including the occupations of civil engineers and construction managers). Mechanical engineers are the second most common, followed by industrial engineers. BLS recommends against directly comparing occupations over time because of changes in sampling methods and occupation definitions.[6] While keeping with the spirit of that caveat, a rough comparison between 2006 and 2016 can be made: there is considerably more demand today for engineers than ten years ago, and most of the increase was for marine, civil, mechanical, industrial, and electrical engineers.

Two primary forces affect the future of Maine's engineering workforce: an aging workforce and slow economic growth. This results in significant demand for replacement workers but very little growth in new job openings. The Maine Department of Labor projects more than 2,000 job openings for engineers over the next ten years, almost all of which (+1,910) will be from replacing older workers. Very little growth (+150) is projected to come from new job growth.[7] However, it is important to note that the low projected growth in new job openings is inconsistent with the past ten years, when engineering occupations grew steadily.

[6] https://www.bls.gov/oes/oes_ques.htm

[7] This estimate is consistent with an estimate of growth in the Professional and Technical Services industry, which makes up 41% of engineering occupations. Growth in this sector is projected to grow 5.7%. Multiplying .7% times 41% of the 6,600 engineers results in a projected growth of 155

Engineering Jobs and Projections

	Jobs			Projections			
	2006	2016	LQ, 2016	New Jobs	Annual Replace-ments	Annual Openings	10-Year Total
Engineering Managers	750	570	0.75	0	20	20	200
Construction Managers	1,030	1,120	1.05	0	46	46	460
Aerospace Engineers				0	1	1	10
Biomedical Engineers		40	0.49	7	3	10	100
Chemical Engineers	190	60	0.46	1	5	6	60
Civil Engineers	810	1,060	0.87	4	32	36	360
Computer Engineers							
Electrical Engineers	290	430	0.55	2	11	13	130
Electronics Engineers	150	210	0.38	0	5	5	50
Enviro Engineers	310	200	0.91	1	5	6	60
Health/Safety Engineers	110	80	0.76	0	2	2	20
Industrial Engineers	440	690	0.63	0	20	20	200
Marine Engineers	50	350	10.20				
Materials Engineers	50	80	0.67	0	3	3	30
Mechanical Engineers	620	920	0.75	0	24	24	240
Nuclear Engineers							
Engineers, All Other	270	610	1.16	0	9	9	90
Sales Engineers	80	180	0.56	0	6	6	60
TOTAL	**5,150**	**6,600**		**15**	**191**	**206**	**2,060**

Maine Department of Labor Statistics, Occupational Projections

LQ = Location Quotient, a measure of how concentrated an occupation is in Maine compared to the rest of the nation; a value greater than 1.00 indicates a higher concentration of jobs in this occupation

2. Age of Maine's Engineers

To deepen the understanding of the need for replacement engineers, data on the age of the workforce was compiled from the U.S. Census Bureau Longitudinal Employer-Household Dynamics program. Data is not available for engineers by themselves, but it is available for employees in the Professional, Scientific, and Technical Services industry, where 40% of engineers work. In that industry, 26% of workers are 55 or older in Cumberland County, and 28% are 55 or older across Maine. If we assume engineers in other industries follow the same general age trend, then it is likely about 1,800 engineers in Maine will reach retirement age (65) in the next ten years. This result is broadly consistent with the MDOL's projection of 1,910 replacement workers over the next ten years.

3. New England

The story is similar across New England. Demand for engineers has grown over time, and is highest for civil engineers (including construction managers), followed by mechanical engineers and industrial engineers. Compared to Maine, there is stronger demand for electrical engineers and engineering managers[8] in New England. Looking ahead to the next ten years, New England is projected to have almost 40,000 job openings for engineers. The highest demand is projected to be for mechanical engineers and civil engineers, followed by industrial engineers.

Engineering Jobs in New England

	Jobs		**Projections**	
	2006	2016	Annual Openings	10-Year Total
Engineering Managers	12,200	13,080	400	4,000
Construction Managers	9,560	12,510	410	4,100
Aerospace Engineers	1,810	2,930	100	1,000
Biomedical Engineers	1,760	3,180	100	1,000
Chemical Engineers	1,980	1,480	50	500
Civil Engineers	12,800	14,580	510	5,100
Computer Engineers	4,770	3,790	110	1,100
Electrical Engineers	10,200	13,750	280	2,800
Electronics Engineers	7,790	5,720	180	1,800
Enviro Engineers	3,250	3,960	160	1,600

[8] Includes architectural managers

Health/Safety Engineers	1,570	1,000	30	300
Industrial Engineers	13,470	16,050	450	4,500
Marine Engineers	50	840	0	00
Materials Engineers	1,530	1,660	80	800
Mechanical Engineers	16,110	19,450	780	7,800
Nuclear Engineers	270	340	20	200
Engineers, All Other	7,360	5,420	150	1,500
Sales Engineers	3,830	5,380	170	1,700
TOTAL	110,310	125,120	3980	39,800

U.S. Department of Labor, Bureau of Labor Statistics

4. Job Postings

The labor market information company Burning Glass Technologies provides an alternative view of demand for engineers through its compilation of online job postings. Like the BLS data, there are caveats – for example, job postings do not always directly translate to job openings, and job postings in Maine do not necessarily mean that the job itself is in Maine. It is also not possible to differentiate between a replacement job and a "new" job.

From January 1, 2015 to January 1, 2017, there were over 2,000 job postings for engineers. Five occupations accounted for two-thirds of the postings: civil, mechanical, electrical, industrial, and chemical engineers.

Online Job Postings for Engineers, 2015-2016

	Online Jobs Postings 2015-2016
Civil Engineers	416
Mechanical Engineers	370
Electrical Engineers	349
Engineers, All Other	214
Industrial Engineers	109
Chemical Engineers	106
Manufacturing Engineers	91
Industrial Safety and Health Engineers	87
Environmental Engineers	66

Materials Engineers	41
Transportation Engineers	31
Nuclear Engineers	30
Electronics Engineers, Except Computer	28
All other	85
Total	2,023

Burning Glass Technologies

5. Engineering Degrees

For the 2014-15 academic year, institutions in Maine awarded 333 bachelor degrees in engineering, of which the University of Maine awarded 196 (59%) and USM awarded 34 (10%). USM awarded a majority of electrical engineering degrees (20 of 33) and 14 of the 78 mechanical engineering degrees. Maine Maritime awarded all 101 Naval/Marine and systems engineering degrees. The University of Maine awarded all 34 graduate degrees.

For the 2015-16 academic year, 425 bachelor degrees in engineering were awarded, of which the University of Maine awarded 255 (60%) and USM awarded 53 (12%). USM awarded roughly half of electrical engineering degrees and 28% of mechanical engineering degrees. Maine Maritime awarded 117 degrees. The University of Maine awarded 49 graduate degrees.

Across New England, over 5,800 bachelor degrees and 4,300 graduate degrees were awarded in 2014-15, and 6,400 bachelor degrees and 4,700 graduate degrees were awarded in 2015-16.

Engineering Degrees in New England and Maine, 2014-2016

	2014-15		**2015-16**	
	Bachelor	**Graduate**	**Bachelor**	**Graduate**
New England	5,800	4,300	6,400	4,700
Maine Maritime	101		117	
U Maine	196	34	255	49
USM	34		53	
Total Maine	333	34	425	49
% Maine	*6%*	*1%*	*7%*	*1%*

National Center for Education Statistics

The most common disciplines for new engineering graduates of Maine colleges and universities are mechanical engineering and marine engineering, followed by civil engineering.

Engineering Degree Majors at Maine Colleges and Universities, 2014/2015-2015/2016

	2014-15		2015-16	
	Bachelor	**Graduate**	**Bachelor**	**Graduate**
Agricultural Engineering	0	1		1
Biomedical/Medical Engineering	28		24	1
Chemical Engineering	29	6	40	5
Civil Engineering	49	8	64	13
Computer Engineering	9	2	13	6
Electrical/Electronics/Communications	33 (20, USM)	5	44 (21, USM)	4
Engineering General	2			
Engineering Physics	4	2	10	4
Mechanical Engineering	78 (14, USM)	8	113 (32, USM)	6
Naval Architecture and Marine Eng.	86		107	0
Surveying Engineering		2		9
Systems Engineering	15		10	0
TOTAL	**333**	**34**	**425**	**49**

National Center for Education Statistics

6. Supply vs. Demand

Estimating how well the supply of new engineers matches with employer demand is complex. If we assume perfect matches between recent college graduates and BLS projected job openings, Maine's 300-400 annual engineering graduates are more than enough to fill the projected 200+ job openings. In reality, the situation is more complicated. For example, a recent survey of University of Maine engineering graduates found that only 40% were working in an engineering field in Maine.[9] Further, many job openings require experience, particularly when replacing older workers, and there are other employment-related issues that may not be attractive to the pool of graduates.[10] Occupational projections may also under-estimate demand in these fields. For example, if we assume just half of the Burning Glass job postings translate to engineering jobs in Maine, the annual projected job openings are more than double the BLS projections.

[9] Presentation by Dana Humphrey

[10] http://www.urban.org/research/publication/eye-storm/view/full_report

In this analysis, several scenarios with different assumptions about the supply of engineering graduates and the demand for new engineers are presented. Consistent with the recent survey of engineering graduates, we first assume that just 40% of engineering graduates remain in Maine and work in an engineering field. We then compare that supply to three scenarios for demand: a scenario where we take the BLS projections as given; a scenario where new engineering jobs increase 5% over the next ten years (and replacement jobs remain as projected by BLS); and a scenario where one-third of the annual job postings aggregated by Burning Glass translate to a job opening in Maine.

Supply and Demand for Engineers, Maine

	All Engineers	
Supply		
Annual Degrees (avg. 2014/2015-2015/2016)	380	
40% Placement	152	
Demand		
Scenario 1: BLS projections	206	
Scenario 2: BLS Projections + 5% Growth in New Jobs	224	
Scenario 3: 1/3 Burning Glass Job Openings	334	
Shortage		Over 10 Years
Scenario 1: BLS projections	-54	-540
Scenario 2: BLS Projections + 5% Growth in New Jobs	-72	-720
Scenario 3: 1/3 Burning Glass Job Openings	-182	-1,818

Maine Department of Labor, National Center for Education Statistics, 45North Research

7. Occupations of Focus

There will always be uncertainty about which occupations will offer the most job opportunities in the future. Four occupations, however, jump out as solid bets. Jobs in each of these occupations increased significantly over the last ten years, are projected by BLS to have almost 200 job openings in the next ten years, are ranked in the top four job postings by Burning Glass, are suitable for recent graduates, and have a location quotient less than 1. These occupations are civil engineers, mechanical engineers, industrial engineers, electrical and electronics engineers (combined).

Industrial engineering, with no program in Maine or northern New England, has the largest gap between supply and demand in two of the three scenarios.

Supply and Demand for Occupations of Focus, Maine

	Civil	Electrical + Electronics	Industrial + Manufacturing	Mechanical
Supply				
Annual Degrees (avg. 2014/2015-2015/2016)	56	39	0	96
40% Placement	22	16	0	38
Demand				
Scenario 1: BLS projections	36	18	19	24
Scenario 2: BLS Projections + 5% Growth in New Jobs	37	20	23	29
Scenario 3: 1/3 Burning Glass Job Openings	69	62	33	61
Shortage				
Scenario 1: BLS projections	-14	-2	-19	n/a
Scenario 2: BLS Projections + 5% Growth in New Jobs	-15	-4	-23	n/a
Scenario 3: 1/3 Burning Glass Job Openings	-47	-46	-33	-23

Maine Department of Labor, National Center for Education Statistics, 45 North Research

Looking across New England, 450 job opening in industrial engineering are projected over the next ten years. Only mechanical and civil engineering are projected to have more. However, New England's universities supply a large number of both of these disciplines: there are 29 mechanical engineering programs and 21 civil engineering programs, graduating 2,633 and 1,148 new engineers annually, respectively. There are just seven industrial engineering programs, none of which are in Maine, Vermont, or New Hampshire, with just 211 graduates in 2014-15. Industrial engineering is the only discipline to have more projected job openings than annual degree completers.

Supply and Demand for Engineers, New England

	Projected Annual Openings	Annual Degrees, 2014-15
Engineering Managers	400	--
Construction Managers	410	--
Aerospace Engineers	100	188
Biomedical Engineers	100	825
Chemical Engineers	50	741
Civil Engineers	510	1,148
Computer Engineers	110	658
Electrical Engineers	280	1,594
Electronics Engineers	180	
Environmental Engineers	160	186
Industrial Engineers	450	211
Marine Engineers	0	154
Materials Engineers	80	191
Mechanical Engineers	780	2,633
Nuclear Engineers	20	45

Maine Department of Labor, National Center for Education Statistics

Appendix B: Review of Regional Engineering Programs

This appendix presents a high-level overview of New England's engineering landscape and Maine's place within it. Each year, New England colleges and universities with ABET accredited programs award approximately 12,000 bachelor's and graduate degrees in engineering and engineering technology. (In 2015-2016, 94.0% were in engineering and 6.0% were in engineering technology.) That number is growing rapidly, up 35% in the last five years.[11] The heart of degree production is Massachusetts, with Maine and the other New England states contributing smaller but significant numbers of graduates to the field.

The growth of the University of Southern Maine's (USM) engineering program is helping to increase the state's production of bachelor's degrees. Collectively, USM and UM offer many of the most popular, high-growth engineering majors in New England. Environmental and industrial engineering are two popular fields in which Maine does not have stand-alone degree programs.

The following tables provide an overview of Maine's position within New England's engineering landscape. All data are from the National Center for Education Statistics' Integrated Postsecondary Education Data System, the ABET accrediting organization, and individual institutions' engineering websites. "ABET accredited" means the institution has at least one academic program accredited by ABET. For instance, Maine Maritime Academy offers five engineering and engineering technology majors, three of which are accredited by ABET. Therefore, MMA and all the degrees it awards are included.

- **Three of New England's 37 institutions with ABET-accredited programs are in Maine.**

  There are currently 37 institutions in New England with bachelor's- and graduate-degree programs accredited by the Engineering Accreditation Commission of ABET, engineering's national accreditation body (excluding terminated and terminating programs). Fifteen are in Massachusetts, ten are in Connecticut, and the rest are scattered throughout Rhode Island (4), Maine (3), Vermont (3), and New Hampshire (2).

Bachelor-and-above ABET accredited institutions

(as of June 2017, excludes terminated or terminating programs)		Number	Share of NE total
1	Massachusetts	15	41%
2	Connecticut	10	27%
3	Rhode Island	4	11%
4	**Maine**	**3**	**8%**
5	Vermont	3	8%
6	New Hampshire	2	5%

[11] Academic year 2010/11 compared to 2015/16 as reported by the National Center for Education Statistics, Integrated Postsecondary Education Data System, accessed June 2017.

- **Maine is New England's fourth largest producer of engineering undergraduate degrees.**

In 2015-2016, New England's engineering programs awarded approximately 6,500 engineering bachelor's degrees (excluding engineering technology). More than three-quarters came from Massachusetts and Connecticut. Maine was the fourth largest contributor at 7%, up from 6% in 2010-2011.

Engineering bachelor's degrees per year

(by 2015/16 bachelor's degrees conferred)		Number	Share of NE total
1	Massachusetts	3,882	60%
2	Connecticut	1,115	17%
3	Rhode Island	463	7%
4	**Maine**	**425**	**7%**
5	New Hampshire	375	6%
6	Vermont	224	3%

- **Maine is the third largest contributor to the growth of undergraduate degrees.**

The number of undergraduate engineering degrees awarded in New England increased 39% from 2010-2011 to 2015-2016. Again, most of the growth occurred in Massachusetts (65%) and Connecticut (19%), followed by Maine (8%) and the rest of New England.

Contribution to regional growth of engineering bachelor's degrees

(by share of New England's growth of bachelor's degrees 2010/11 to 2015/16)		Number	Percentage
New England total		1,835	100%
1	Massachusetts	1,195	65%
2	Connecticut	357	19%
3	**Maine**	**141**	**8%**
4	Rhode Island	93	5%
5	New Hampshire	38	2%
6	Vermont	11	1%

- **Collectively, UM and USM offer most common undergraduate programs.**

A review of program websites shows the two most common undergraduate offerings are mechanical and electrical engineering, each available at nearly thirty institutions throughout New England, including UM and USM. UM also offers the next most common programs: civil, computer, and chemical engineering. Common undergraduate majors not offered in Maine include environmental and industrial engineering. UM appears to be the only institution in New England with undergraduate programs in construction engineering and survey engineering technology.

Ten most common bachelor's degree programs

(by number of institutions offering the program)

1	Mechanical engineering*†	29
2	Electrical engineering*†	28
3	Civil engineering†	21
3	Computer engineering†	21
5	Chemical engineering†	13
6	Biomedical engineering†	12
7	Engineering sciences/general engineering†	10
7	Environmental engineering	10
8	Industrial engineering	7
8	Bioengineering	7

* Offered at USM, † Offered at UM

- **Collectively, UM and USM offer most popular undergraduate programs.**

In 2014-2015, half of the engineering bachelor's degrees awarded in New England were in mechanical engineering, civil engineering, and electrical, electronics, and communications engineering. USM offers the first two majors and UM offers all three. UM also offers other popular majors such as civil, chemical, and computer engineering, and electrical and mechanical engineering technologies. Biomedical/medical engineering, the fifth most popular major (8% of all bachelor's degrees in 2014-2015), is offered by UM. UM also offers engineering physics, which is accredited as an engineering science program.

Most popular bachelor's degree programs in New England			
(by number of degrees conferred in 2014/15)		Number	Share of total
1	Mechanical Engineering*†	1,879	28%
2	Civil Engineering†	741	11%
3	Electrical*†, Electronics and Communications Engineering	702	11%
4	Chemical Engineering†	570	9%
5	Biomedical/Medical Engineering†	533	8%
6	Computer Engineering†	316	5%
7	Mechanical Engineering Related Technologies†	206	3%
8	Engineering - General	190	3%
9	Electrical Engineering Technologies†	181	3%
10	Naval Architecture and Marine Engineering	154	2%

* Offered at USM, † Offered at UM

- **USM and UM offer some high-growth undergraduate majors.**

From 2009-2010 to 2014-2015, the number of bachelor's degrees awarded in New England increased 32%. However, that growth occurred unevenly across majors. High-growth fields include popular majors such as mechanical, biomedical/medical, chemical, and computer engineering and more specialized majors such as materials and environmental engineering.

High-growth bachelor's degree programs in New England			
(by increase in number of degrees conferred 2009/10-2014/15)		Number of degrees	Percentage growth
1	Mechanical Engineering*†	693	58%
2	Biomedical/Medical Engineering	250	88%
3	Chemical Engineering†	216	61%
4	Computer Engineering†	121	62%
5	Civil Engineering†	82	12%
6	Electrical, Electronics and Communications Engineering*†	81	13%
7	Electrical Engineering Technologies/Technicians†	68	60%
8	Engineering – Other	55	82%
9	Materials Engineering	48	171%
10	Environmental/Environmental Health Engineering†	46	90%

* Offered at USM, † Offered at UM

- **Maine is New England's sixth largest producer of engineering graduate degrees.**

In 2015-2016, New England's engineering programs awarded approximately 5,000 graduate degrees (excludes engineering technology). Fully 90% came from Massachusetts and Connecticut. Maine was the sixth largest contributor of graduate degrees at 1%, unchanged from 2010-2011.

Engineering graduate degrees per year

(by 2015/16 graduate degrees conferred)

		Number	Share of NE total
1	Massachusetts	3247	68%
2	Connecticut	1043	22%
3	New Hampshire	181	4%
4	Rhode Island	177	4%
5	Vermont	100	2%
6	**Maine**	**49**	**1%**

- **UM offers most common masters programs.**

The five most common master's programs in New England are electrical, mechanical, civil, computer, and chemical engineering, all of which are offered at UM. The next most common are environmental engineering, biomedical engineering and materials science. UM appears to be the only institution in New England offering a graduate certificate in aerospace engineering, and one of only two institutions offering a graduate certificate in innovation engineering. Both programs are offered through UMaine Online.

Ten most common master's degree programs

(by number of institutions offering the program)

1	Electrical engineering†	20
2	Mechanical engineering†	19
3	Civil engineering†	17
4	Computer engineering†	14
5	Chemical engineering†	11
5	Environmental engineering	11
6	Biomedical engineering†	9
7	Materials Science	8
8	Engineering and Business/Management†	7
9	Biological Engineering	6

† Offered at UM

- **UM offers most popular graduate programs.**

In 2014-2015, more than half of graduate engineering degrees awarded in New England were in electrical, mechanical, civil, and computer engineering, all of which are offered at UM in some format. Popular programs not offered in Maine include systems and materials engineering.

Most popular graduate degree programs

(by number of degrees conferred in 2014/15)		Number	Share of total
1	Electrical†, Electronics and Communications Engineering	892	20%
2	Mechanical Engineering†	754	17%
3	Civil Engineering†	405	9%
4	Computer Engineering†	337	8%
5	Engineering - General	314	7%
6	Systems Engineering	299	7%
7	Biomedical†/Medical Engineering	287	7%
8	Chemical Engineering†	171	4%
9	Engineering - Related Fields	124	3%
10	Materials Engineering	111	3%

† Offered at UM

- **UM offers some high-growth graduate majors.**

From 2009-2010 to 2014-2015, the number of graduate degrees awarded in New England increased 29%. As with bachelor's degrees, some majors grew more than others. High-growth sub-disciplines include popular fields such as mechanical, electrical, and computer engineering.

High-growth graduate degree programs

(by change in number of degrees conferred 2009/10-2014/15)		Number	Percentage
1	Mechanical Engineering†	187	33%
2	Electrical, Electronics and Communications Engineering†	162	22%
3	Computer Engineering†	157	87%
4	Engineering – General	125	66%
5	Biomedical/Medical Engineering†	118	70%
6	Civil Engineering†	106	35%
7	Systems Engineering	88	42%
8	Engineering Physics	47	522%
9	Industrial Engineering	28	51%
10	Chemical Engineering†	26	18%

† Offered at UM

Appendix C: Review of Best Practices and Innovation

Two fundamental challenges face today's engineering graduates: the exponential growth of knowledge and technology, and the globalization of the engineering workforce.[12] The quest to prepare students for these challenges is inspiring engineering educators across the country and around the world to become education innovators – questioning established practices, testing new pedagogies, and developing new programs.

This paper reviews some of the best practices and innovative techniques being developed throughout the U.S. It is not an exhaustive survey of the academic literature on engineering education. Rather, it highlights major trends and exemplary programs, reporting the results of rigorous evaluations were available.

1. **Emphasizing cross-disciplinary learning**

Some scholars argue that the growing number of engineering services being offered in developing countries at low cost presents a long-term challenge to the U.S. engineering community.[13] Future engineers, they argue, will have to justify higher wages with superior breadth of knowledge and capacity for innovation. Given this situation, a competitive advantage of U.S. engineering programs is their location within larger universities that allow learning and collaboration across disciplines.

Olin College of Engineering has quickly developed a reputation for innovative cross-disciplinary teaching since opening in 2002. Olin's educational philosophy emphasizes the role of engineering as a tool for solving societal challenges. "The traditional curriculum is too narrow; it teaches students how to solve problems, but not how to find the right problems to solve, or how to get their solutions out of the lab and into the world."[14] To address this shortcoming, Olin incorporates cross-disciplinary learning throughout its curriculum and programs. In their first-semester, Olin students take a foundations course in arts, humanities, and social science and a course in entrepreneurship. Although Olin is devoted entirely to engineering, its course catalogue is filled with titles such as "Engineering for Humanity;" "The Stuff of History: Materials, Culture in Ancient, Revolutionary, and Contemporary Times;" and "Identity from the Mind & the Brain: Who Am I and How Do I Know?"[15]

One example of Olin's unique approach is its collaboration with the nearby liberal-arts-oriented Wellesley College and business-oriented Babson College on an undergraduate Sustainability Certificate.[16] A core element of the program is a semester-long, project-based course in which teams of students from all three institutions design solutions for environmental problems utilizing the unique tools that engineering, business, and liberal arts bring to environmental issues.

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[12] James J. Duderstadt. "Engineering for a changing world." In *Holistic Engineering Education*, pp. 17-35. Springer New York, 2010.

[13] Ibid.

[14] Olin College of Engineering (Olin). "Curriculum." http://www.olin.edu/academics/curriculum/. Accessed July 9, 2017.

[15] Olin. "Course listing." http://www.olin.edu/course-listing/. Accessed July 9, 2017.

[16] Babson/Olin/Wellesley Three College Collaboration. "Babson-Olin-Wellesley Sustainability Certificate Program." Accessed July 9, 2017.

In 1993, Stanford University's Department of Civil and Environmental Engineering embraced cross-disciplinary learning when it founded the P^{5}BL Laboratory (which stands for problem-, project-, product-, process-, people-based learning). P^{5}BL coordinates year-long Architecture/Engineering/Construction (AEC) Global Teamwork challenges in which international teams of students design solutions for real clients.[17] Each team member has an assigned role, such as architect, structural engineer, construction manager, financial manager, or apprentice (undergraduates). The team has access to a large pool of faculty mentors and must manage their work over long distances and multiple time zones. AEC courses advance Stanford's belief that, "it is essential to educate engineers who possess not only deep technical excellence, but the creativity, cultural awareness and entrepreneurial skills that come from exposure to the liberal arts, business, medicine and other disciplines that are an integral part of the Stanford experience."[18]

2. Engaging students and industry in real-world problem-solving

Some engineering programs are promoting cross-disciplinary thinking through real-world problem solving. "Problem-based" or "challenge-based" learning presents students with difficult problems with no established solution, sometimes for the greater good and sometimes for an industry client.[19] These experiences seek to increase students' appreciation for the multi-dimensional nature of real-world challenges, including social, cultural, and financial considerations. While internships and co-ops can provide valuable real-world experiences, they are generally undertaken by individual students off-campus.[20] In contrast, having teams of students undertake real-world problems with the help of faculty and industry advisors can increase the complexity of the problem students address, create more opportunities for guided learning, and, consequently, increase the knowledge and skills students gain from the experience. Furthermore, these projects can generate explicit benefits for industry partners, a best practice for fostering long-lasting academic-industry partnerships.[21]

Some programs incorporate real-world problems in competitive challenges. The Massachusetts Institute of Technology's (MIT) IDEAS Global Challenge in an annual competition where students develop solutions to address problems facing underserved communities.[22] Successful teams receive grant money for research and prototypes and then enter a final competition for prizes of up to $15,000 to implement their solution. Recent IDEAS teams have developed apps for recovering opioid addicts and designed ambulance carts that attach to motorcycles. Some challenges are issued and funded by corporate or philanthropic partners.

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[17] Renate Fruchter. "Dimensions of teamwork education." *International Journal of Engineering Education* 17, no. 4/5 (2001): 426-430.

[18] Stanford University College of Engineering. "About." https://engineering.stanford.edu/about. Accessed July 9, 2017.

[19] Geoff Mulgan, Oscar Townsley, and Adam Price. "The challenge-driven university: how real-life problems can fuel learning." Nesta (2016).

[20] Caleb Burns, and Shweta Chopra. "A meta-analysis of the effect of industry engagement on student learning in undergraduate programs." *Journal of Technology, Management, and Applied Engineering* 33, no. 1 (2017): 1.

[21] Garousi, Vahid, Kai Petersen, and Baris Ozkan. "Challenges and best practices in industry-academia collaborations in software engineering: A systematic literature review." *Information and Software Technology* 79 (2016): 106-127.

[22] Rob Matheson. "'IDEAS' to change the world." *MIT News*. http://studentlife.mit.edu/news/%E2%80%9Cideas%E2%80%9D-change-world. Accessed July 9, 2017.

At Olin College, every senior undertakes a year-long capstone project that addresses a real-world problem for a real client.[23] Students work in teams with a faculty mentor and industry advisors. There are two categories of projects – those undertaken for a sponsoring corporation and those that address a social challenge. In the SCOPE program, corporate partners provide $55,000 and an engineering problem to be tackled by the Olin students.[24] Current projects include designing robots to sort and pack items in Amazon's warehouses, helping Boston Scientific develop a new endoscope, and identifying new materials and processes to enhance Raytheon's microwave board circuitry.[25] In the Affordable Design and Entrepreneurship program, student teams work with partners around the globe on challenges facing populations in developing countries, such as designing a low-cost baby-warmer to prevent infant deaths from hypothermia and improving cassava processing machines in Ghana.[26]

Project-based collaborations are some of the most substantive and fruitful partnerships between academia and industry. Other interactions include internships and co-ops, site tours, and guest speakers. A meta-analysis of thirty-three studies of academic-industry partnerships in software engineering synthesized the best practices of these programs. They include sustained interactions, engagement by top management and senior administrators, projects based on real-world problems, and explicit benefits to the industry partner.[27]

3. Fostering professional skills

Aligning the non-academic skills of engineering graduates with the realities of the modern workplace is another dimension of engineering education that has gained attention in recent years.[28] One analyst notes, "the engineering school accreditation process has ensured the acquisition of technical competencies. Rather, engineering majors who fail in industry are those who have all the right technical competencies but not the soft or people skills to be successful."[29]

Workplace skills are both interpersonal and intrapersonal. Interpersonal skills – often called "soft skills" – are critical for building relationships and working in a team. These include knowing how to communicate effectively, interview well, and be culturally sensitive. Many of the team-based activities described above cultivate these skills. Intrapersonal skills like creativity and perseverance are harder to define but research suggests these traits are essential for students to succeed in college and the workplace.[30]

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[23] Olin. "Engineering capstone." http://www.olin.edu/academics/experience/engineering-capstone/. Accessed July 9, 2017.

[24] Olin. "How SCOPE works." http://www.olin.edu/collaborate/scope/about/how_it_works/. Accessed July 9, 2017.

[25] Olin. "2016-17 SCOPE Program." http://www.olin.edu/collaborate/scope/projects/2016_17/. Accessed July 9, 2017.

[26] Olin. "Design that Matters joins global health track of Affordable Design & Entrepreneurship program at Olin College." Accessed July 9, 2017.

[27] Garousi, Vahid, Kai Petersen, and Baris Ozkan. "Challenges and best practices in industry-academia collaborations in software engineering: A systematic literature review." *Information and Software Technology* 79 (2016): 106-127.

[28] See for example: Rick Stephens. "Aligning engineering education and experience to meet the needs of industry and society." *The Bridge* vol. 43, no. 2 (2013): 31-34.

[29] Rick Stephens. "Aligning engineering education and experience to meet the needs of industry and society." *The Bridge* vol. 43, no. 2 (2013): 31-34.

[30] Karin Hess and Brian Gong. "Ready for college and career? Achieving the Common Core Standards and beyond through deeper, student-centered learning." National Center for the Improvement of Educational Assessment and Nellie Mae Education Foundation (2014).

Iowa State University's engineering department determined that the best place to evaluate students' workplace skills is in co-ops and internships, and the best evaluators are the students and their supervisors.[31] Through a process that involved input from 212 employers, alumni, faculty, and students, they identified fourteen workplace competencies ranging from engineering knowledge and quality orientation to cultural adaptability and integrity. Following an internship or co-op, students and their supervisors complete an on-line evaluation that assesses students' mastery of the fourteen competencies (the evaluations are mandatory for students to receive credit).

The University of Texas at El Paso College of Engineering has elevated engineering leadership to an undergraduate major. Engineering students in the program develop skills and knowledge in the program's three pillars: character, competence, and capacity (adapted from the U.S. Military Academy at West Point).[32] One innovative aspect of the program is a required non-credit class for first-year students called Introduction to Engineering Leadership that is designed and taught by second-year students.[33] Putting students in charge of the course creates an opportunity for them to practice leadership skills, and faculty members credit student instruction with helping to increase the program's retention rate from 30% to 70%.[34]

Massachusetts Institute of Technology's Undergraduate Practice Opportunities Program (UPOP) is a year-long development program that helps sophomores hone the professional skills needed for career success.[35] It provides workshops and coaching on resumes and cover letters, interviewing, networking, negotiating, and communication. The program takes place during students' sophomore year so they can use those skills to acquire internships and other work experiences that will position them for career success by the time they graduate.

4. Engaging first-year students

Research

Historically, hands-on research often came at the end of a student's undergraduate career as a capstone experience that built on the foundational knowledge they had acquired during the first few years of study.[36] While this is a logical progression, engaging students in research experiences sooner has been found to increase retention. The University of Central Florida's Learning Environment and Academic Research Network (LEARN) program pairs first-year engineering students with graduate-student mentors to experience hands-on research for a minimum of 3-hours per week. The first two cohorts of LEARN students have exhibited long-

[31] Thomas J. Brumm, Larry F. Hanneman, and Steven K. Mickelson. "Assessing and developing program outcomes through workplace competencies." *International Journal of Engineering Education* vol. 22, no. 1 (2006): 123.

[32] Yazmin Montoya, Aaron Eduardo Pacheco Rimada, Isaiah Nathaniel Webb, and Meagan R. Vaughan. "Developing leaders by putting students in the curriculum development driver seat." In *ASEE National Conference Proceedings, Seattle, WA,* (2015): 26.502.1-26.502.16.

[33] Ibid.

[34] Ibid.

[35] Massachusetts Institute of Technology. "Undergraduate Practice Opportunities Program." https://upop.mit.edu/. Accessed July 9, 2017.

[36] Kimberly R. Schneider, Amelia Bickel, and Alison Morrison-Shetlar. "Planning and implementing a comprehensive student-centered research program for first-year STEM undergraduates." *Journal of College Science Teaching* 44, no. 3 (2015): 37-43.

term increases in retention and GPA. By the end of their second year, 75% of LEARN students remain in a STEM field compared to 49% of non-LEARN students in control groups.[37]

Olin College of Engineering has embraced first-year research by incorporating hands-on projects into three required courses that students take in their first semester. Likewise, MIT freshmen are immediately eligible for its Undergraduate Research Opportunities Program, which allows them to assist MIT faculty members conducting original research.

Learning Communities

Many colleges are experimenting with "learning communities" – groups of first-year students who take two or more classes together, sometimes with the same instructors and/or support staff. The goal is to help students make strong social connections and engage more deeply with course material during their critical first semester of college. Research at the University of California Fullerton shows that students who participate in Freshman Learning Communities have higher retention and graduation rates than those who do not, even accounting for high school GPA, and the communities especially benefited minority students.[38] Olin requires all students to take the one-credit course "Olin Introductory Experience" aimed at ensuring their successful transition to the college.[39] Some engineering programs, such as Drexel University's, offer living-learning communities where new engineering students can live in the same residence hall as other first-year students in their major.[40]

5. Re-examining classroom pedagogy

In 2012, the American Society for Engineering Education (ASEE) noted the need for the engineering community "to raise its awareness of the considerable educational infrastructure that already exists, both within and outside engineering, and the substantive body of knowledge of proven principles and effective practices in teaching, learning, and educational innovation."[41] ASEE called for engineers to value educational innovation within their field as much as technological innovation.[42]

In that spirit, the following section highlights some of the best pedagogical techniques being used by engineering programs across the country. Many of them focus on improving student outcomes in the introductory courses that often serve as gateways to the major. These new techniques are illuminating the role of pedagogy in student performance and retention.

[37] Author's calculations based on Scneider, Bickel, and Morrison-Shetlar (2015).

[38] Sunny Moon, et al. "High-impact educational practices as promoting student retention and success," proceedings from The Ninth Annual National Symposium on Student Retention, University of Oklahoma, C-IDEA, 2013.

[39] Olin. "OIE1000: Olin Introductory Experience," http://www.olin.edu/course-listing/oie1000-olin-introductory-experience/. Accessed July 9, 2017.

[40] Drexel University College of Engineering. "Engineering Learning Communities," http://drexel.edu/engineering/programs/undergraduate/engineering-learning-communities/. Accessed July 8, 2017.

[41] Leah H. Jamieson, and Jack R. Lohmann. "Innovation with impact: Creating a culture for scholarly and systematic innovation in engineering education." *American Society for Engineering Education, Washington* (2012): 77.

[42] Ibid.

Active Learning

A large and growing body of research suggests that traditional college lectures are not the most effective way to increase student knowledge. In particular, researchers are comparing the results of tradition learning characterized by "continuous exposition by the teacher" and active learning that "emphasizes higher-order thinking and often involves group work."[43] A recent meta-analysis of 225 studies compared the performance of college students in science, technology, engineering, and mathematics (STEM) courses that utilize those techniques.[44] The researchers found that students in traditional-learning classes are 55% more likely to receive failing grades or withdraw from the class than students in active-learning classes.[45] The findings held true across all STEM disciplines and class sizes.

Flipped Classroom

The rise of active-learning techniques coincides with another new practice – the "flipped classroom." The term generally refers to teachers delivering lectures via prerecorded videos that students watch as homework, which frees up class time for group- and discussion-based learning. While there is little rigorous, comparative research on flipped classrooms, what exists suggests the potential for positive effects on student performance and engagement.[46] In addition to increasing students' content knowledge, this technique increases the need for them to come to class prepared. The University of Texas at El Paso's Bachelor of Science in Engineering Leadership program uses this technique as "…one of the many ways the program promotes leadership of the self."[47]

Peer instruction (PI) is a flipped-classroom technique popularized at Harvard University in the 1990s. Instructor uses real-time technology to gauge students' responses to questions on the content of pre-class readings and assignments. If a concept is well understood the instructor moves on. If not, students have a few minutes to discuss the topic with each other and re-answer the question. This technique has been found to deepen students understanding and engagement with course material and their classmates. One study compared the results of PI and traditional instruction of a year-long introductory physics course. Students in the traditional course were twice as likely switch to a non-STEM major the following year as students in the PI course (11% versus 5%).[48]

[43] Ibid.

[44] Scott Freeman, Sarah L. Eddy, Miles McDonough, Michelle K. Smith, Nnadozie Okoroafor, Hannah Jordt, and Mary Pat Wenderoth. "Active learning increases student performance in science, engineering, and mathematics." *Proceedings of the National Academy of Sciences* vol. 111, no. 23 (2014): 8410-8415.

[45] Ibid.

[46] Jacob Lowell Bishop, and Matthew A. Verleger. "The flipped classroom: A survey of the research." In *ASEE National Conference Proceedings, Atlanta, GA*, vol. 30, no. 9 (2013): 1-18.

[47] Montoya et al (2015).

[48] Jessica Watkins, and Eric Mazur. "Retaining Students in Science, Technology, Engineering, and Mathematics (STEM) Majors." *Journal of College Science Teaching* 42, no. 5 (2013): 36-41.

Integrated Learning

Integrated learning seeks to increase student engagement and deepen content knowledge by teaching foundational engineering concepts in an integrated manner, rather than in isolation. Responding to low enrollment and retention rates, the Colorado State University's Department of Electrical and Computer Engineering embraced integrated learning during a comprehensive redesign of their pedagogy, curriculum, and organizational structure funded by a five-year grant from the National Science Foundation.[49] They concluded, "the crux of the problem [of high attrition rates] lies in the failings of the traditional course-centric structure wherein faculty function independently without demonstrating the connections between fundamental topics throughout the… curriculum."[50]

The department broke apart some of their core courses and rearranged them into "Learning Studio Modules" that teach concepts in an integrated manner using real-world engineering problems. The department incorporated flipped-classroom elements into its teaching; students must complete pre-work and online evaluations prior to beginning the modules. Finally, the department re-imagined faculty roles by assigning faculty members as "integration specialists" responsible for interweaving skills and concepts throughout the department's curriculum and activities, rather than delivering them as individual components taught in silos. The department is still implementing this redesign but early results are promising. From Fall 2015 to Fall 2016, the numbers of students receiving Ds or Fs in core classes fell by half.[51]

Conclusion

There is ample innovation occurring within the U.S. engineering community to inspire and guide growing programs. While the long-term impact of some initiatives is impossible to know, studies of short-term impacts suggest that student-centric, project-based, real-world learning experiences have the potential to enhance student outcomes and retain more students in the field.

[49] Anthony A. Maciejewski, Thomas W. Chen, Zinta S. Byrne, Michael A. De Miranda, Laura B. Sample McMeeking, Branislav M. Notaros, Ali Pezeshki et al. "A Holistic Approach to Transforming Undergraduate Electrical Engineering Education." *IEEE Access* 5 (2017): 8148-8161.

[50] Ibid.

[51] Ibid.

Appendix D: Engineering Enrollment Data

TO Terry Shehata, Maine Economic Improvement Fund Coordinator
FROM Nancy Davis Griffin, Vice President for Enrollment Management/Student Affairs
CC Jeannine Uzzi, Provost and Vice President for Academic Affairs
DATE July 24, 2017
RE Enrollment Data for Engineering

Below you will find data related to academic programs in Engineering. During our meeting this past spring you asked, what is the demand for engineering? It is my hope that this data answers this question for you. Please let me know if you have any questions regarding this information.

University of Southern Maine Data:

Admissions Data for Engineering & Physical Sciences

Admissions Status	Fall 2015	Fall 2016
Applications	8	15
Admits	6	11
Enrolled	2	9

Overall Enrollment Data (Number of Students)

Academic Program	Fall 2014	Fall 2015	Fall 2016
Electrical Engineering	78	61	71
Mechanical Engineering	107	105	90
Transfers in Engineering	29	37	25

Fall 2016 Profile for Enrolled Engineering Students

Academic Program	FTE	GPA	Average Age	In-state
Electrical Engineering	60%	3.0	22	72%
Mechanical Engineering	72%	2.98	23	68%

Fall 2016 Retention & Persistence Data

Academic Program	1st Year Fall to Spring	2nd Year	3rd Year
Electrical Engineering	100%	46%	56%
Mechanical Engineering	85.6%	80.5%	70%

In looking at the National Clearing House data for USM students who majored in Engineering, it is clear that we are losing students to the University of Maine. Over the past three years we have had 5.12% of these students transfer to the University of Maine. The top competitors for USM in Engineering are the University of Maine and the University of New Hampshire.

State of Maine

The College Board published *College-Bound Seniors* report each year. This report presents data by state for 2016 high school graduates who took the SAT exam. Students are only counted once, no matter how often they are tested. In the state of Maine there were 11,833 test takers who indicated a high school graduation date of 2016. Of this group, 888 stated they intended to major in Engineering in college. This represents 10% of these test takers and put Engineering in the top 3 most selected intended college major for the class of 2016.

It is important to note that of the 11,833 SAT test takers for the class of 2016, 38% sent score reports to the University of Maine and 15.4% sent score reports to the University of Southern Maine. These two schools were in the top three colleges/universities to receive SAT score reports from the class of 2016 (The University of New Hampshire rounds out the top 3).

University of Southern Maine Graduation – Percentage of Bachelor's Degrees Awarded (Common Data Set)

Academic Program	7/1/12 – 6/30/13	7/1/13 – 6/30/14	7/1/14 – 6/30/15	7/1/15 – 6/30/16
Engineering	0.008%	2.09%	2.7%	4.16%
Engineering Technologies	0.03%	3.22%	2.55%	2.82%

**Important to Note that for FY 15 Engineering & Physical Sciences rose to the top 5 schools awarding degrees at USM (118 degrees awarded).*

University of Maine Graduation – Percentage of Bachelor's Degrees Awarded (Common Data Set)

Academic Program	7/1/12 – 6/30/13	7/1/13 – 6/30/14	7/1/14 – 6/30/15	7/1/15 – 6/30/16
Engineering	12.1%	11%	11.9%	14.6%
Engineering Technologies	6.2%	5.8%	6.2%	6.7%

New England

New England has close to 1 million students enrolled in public and private colleges/universities. There are currently 35 colleges/universities that offer engineering as an academic major. The number of schools by state is:

- Connecticut 9
- Maine 3 (UM, USM, Maine Maritime Academy)
- Massachusetts 16
- New Hampshire 2
- Rhode Island 3
- Vermont 2

According to surveys conducted by the New England Association for College Admissions Counseling, admission applications for engineering majors have increased by 8% over the past 3 years across New England. It is projected that applications for engineering majors will continue to grow due to workforce demand.

National Data

In a recent report conducted for *Forbes*, analysts at *PayScale* compared its database with 120 college majors and job growth projections through 2020 from the U.S. Bureau of Labor Statistics to determine the 15 most valuable academic majors in the current marketplace. Ranked by median starting pay, median mid-career pay (10 years in), growth in salary and wealth of job opportunities, engineering and math were at the top of the list. Engineering concentrations comprised one third of the most valuable majors in this report.

The National Science Foundation reports that science and engineering students persist and complete undergraduate programs at a higher rate than non-science and non-engineering students. Generally, the percentages of students earning bachelor's degrees in particular science and engineering fields are similar to the percentages planning to major in those fields.

The National Center for Educational Statistics reports that applications, enrollment and awarding undergraduate degrees in engineering have increased 29.1% since 2009.

Appendix E: Scan of Engineering Education in Maine

Compiled by USM

School	Programs Offered	Faculty	Facilities	Notes
USM	B.S. Degrees: • Electrical Engineering • Mechanical Engineering	▪ Mariusz Jankowski ▪ Michael P. Davis ▪ Mehrdaad Ghorashi ▪ Hongzhi Guo ▪ Mustafa Guvench ▪ Lin Lin ▪ Carlos Lück ▪ James Masi	**John Mitchell Center** (Gorham; location of all facilities below) ▪ Fairchild Semiconductor Electrical Engineering Suite ▪ Pratt & Whitney Mechanical Engineering Laboratory ▪ National Semiconductor Learning Factory ▪ CMP Co. Power & Automation Laboratory ▪ Skunk Works (Student Lab) ▪ IDEXX Education Lab ▪ Electrical Eng. Circuits Lab ▪ Product Testing & Metrology Lab ▪ Stantec Computer Aided Design Lab	Accredited by the Accreditation Board for Engineering and Technology
UMaine	B.S. Degrees: • Biomedical Engineering • Chemical Engineering • Civil/Environmental Engineering • Computer Engineering • Construction Engineering Technology	**Civil & Environmental Engineering** ▪ Aria Amirbahman ▪ Kimberly Huguenard ▪ Shaleen Jain ▪ Jean MacRae ▪ Lauren Ross ▪ Aaron Gallant	**Civil & Environmental Engineering** ▪ The Richard & Jean Higgins Materials Testing Laboratory ▪ The Stephen W. Cole Concrete Laboratory ▪ The Gorrill Palmer Consulting Engineers Soils Laboratory	Accredited by the Accreditation Board for Engineering and Technology

	• Electrical Engineering • Electrical Engineering Technology • Engineering Physics • Mechanical Engineering • Mechanical Engineering Technology • Survey Engineering Technology M.S. Degrees: • Chemical Engineering • Biomedical Engineering • Civil Engineering • Electrical Engineering • Computer Engineering • Mechanical Engineering • Engineering and Business • Engineering Physics Ph.D.: • Chemical Engineering • Civil Engineering • Electrical Engineering • Mechanical Engineering	▪ Per Erik Garder ▪ Dana Humphrey ▪ Melissa Landon ▪ Miltiades Zacas ▪ Habib Joseph Dagher ▪ Bill Davids ▪ Eric Landis ▪ Roberto Lopez-Anido ▪ Edwin Nagy ▪ Xenia Rofes ▪ Willem Brutsaert ▪ Bryan Pearce ▪ Thomas Sandford ▪ Qingping Zou **Mechanical Engineering** ▪ Michael Boyle ▪ Vincent Caccese ▪ Sheila Edalatpour ▪ Wilhelm “Alex” Friess ▪ Andrew Goupee ▪ Babak Hejrati ▪ Zhihe Jin ▪ Justin Lapp ▪ Eric Martin ▪ Justin Poland ▪ Oliver Putzeys ▪ Masoud Rais-Rohani ▪ Senthil Vel ▪ Qian Xue	▪ The Franklin Woodard Environmental Engineering Laboratory ▪ The Kleinschmidt Hydraulics Laboratory ▪ Advanced Geotechnics Laboratory ▪ Advanced Structures and Composites Center ▪ SeaGrant University of Maine Cooperative Extension ▪ Senator George J. Mitchell Center for Sustainability Solutions **Mechanical Engineering** ▪ Crosby Lab ▪ Wave Energy, Offshore Platform Lab ▪ Mechanical Testing Lab ▪ Electronics Lab ▪ Composite Materials Lab ▪ Solar Energy Lab ▪ 3D Printing Lab ▪ Nano-Materials Lab ▪ Wind Tunnel ▪ Biomedical & Robotics Lab ▪ Materials Testing/Shaker Table Lab ▪ Blue Giant Materials Testing System ▪ Biomechanics/Head Injury Lab ▪ Remote Structural Monitoring Lab ▪ Alfond W2Ocean Engineering Lab	

	• Biomedical Engineering (Grad. School of Biomedical Science and Engineering)	▪ Yingchoa Yang ▪ Xudong Zheng ▪ Donald Grant ▪ David Rubenstein ▪ James Sucec **Electrical & Computer Engineering** ▪ Don Hummels ▪ Mauricio Pereira da Cunha ▪ Bruce Segee ▪ Yifeng Zhu ▪ Ali Abedi ▪ Rosemary Smith ▪ John Vetelino ▪ Richard Eason ▪ Nuri Emanetoglu ▪ Duane Hanselman ▪ David Kotecki ▪ Vincent Weaver ▪ Andrew Sheaff **Chemical & Biomedical Engineering** ▪ Robert Bowie ▪ Douglas Bousfield ▪ Caitlin Howell ▪ Albert Co	**Electrical & Computer Engineering** ▪ Laboratory for Surface Science and Technology (LASST) ▪ Clean Room Micro/Nano Fabrication Facility ▪ Sensor and Microelectronic Device Packaging **Chemical & Biomedical Engineering** ▪ Materials Characterization and Processing Facility ▪ Molecular Biophysics Facility ▪ Pulp & Paper Manufacturing Facility ▪ Sensor Development Facility ▪ Spectroscopic Techniques Facility ▪ Surfaces and Interfaces Facility ▪ Transport and Separation Process Facility	

		▪ William DeSisto ▪ Adriaan R.P. van Heiningen ▪ John Hwalek ▪ Andre Khalil ▪ Michael Mason ▪ Paul Millard ▪ David Neivandt ▪ Hemant Pendse ▪ Thomas Schwartz ▪ Karissa Tilbury ▪ G. Peter van Walsum ▪ Sara Walton ▪ M. Clayton Wheeler **Engineering Technology** ▪ Phil Dunn ▪ Howard “Mac” Gray ▪ Knud Hermansen ▪ Will Manion ▪ Amber Killip ▪ Meredith Kirkman ▪ John Allen ▪ Scott Dunning ▪ Jude Pearse ▪ Paul Villeneuve ▪ Joel Anderson ▪ Keith Berube ▪ S. David Dvorak ▪ Brett Ellis ▪ Karen Horton		

		▪ Keith Kinney ▪ Raymond Hintz ▪ Carlton Brown		
Maine Maritime Academy	B.S. Degree: • Marine Systems Engineering (license and non-license) • Marine Engineering Technology • Power Engineering Technology • Marine Engineering Operations • Power Engineering Operations	▪ Tim Allen ▪ Richard Armstrong ▪ Priscilla Audette ▪ Lance Burton ▪ Richard Collenberg ▪ Mark Cote ▪ Lynn Darnell ▪ Scott Eaton ▪ Sadie Alley Ferreira ▪ Barbara Fleck ▪ Laurie Flood ▪ Kaveh Haghkerdar ▪ Joseph Harman ▪ Waldo Harmon ▪ Richard Kimball ▪ Mark Legel ▪ Mark Libby ▪ Jerald Markley ▪ Leo Mazerall ▪ Patrick Moroney ▪ Doug Read ▪ Richard Reed ▪ Andrew Rogers ▪ Brendyan Sarnacki ▪ Jill Schoof ▪ David Skaves ▪ Richard Smith	**Research Facilities & Laboratories** ▪ ABS (American Bureau of Shipping) Center for Engineering, Science, and Research ▪ Engine and Fuels Testing Laboratory ▪ Material Testing Laboratory ▪ Research Projects Laboratory ▪ Renewable Energy Laboratory ▪ Ocean Energy Laboratory **Research Vessel** ▪ R/V *Quickwater*	Accredited by the Accreditation Board for Engineering and Technology

		▪ James Stefanski ▪ Hank (Henry) Stewart ▪ William Tefft ▪ Alan Trundy ▪ Travis Wallace ▪ Paul Wlodkowski ▪ Michael Young		
Southern Maine Community College	A.S. Degree: • Engineering • Electrical Engineering Technologies	▪ Meredith Comeau ▪ Jamie McGhee ▪ Adam Tambone	▪ Computer Science & Engineering Center (CSEC) ▪ Ross Technology Center	Transfer agreements with USM and UMaine
Central Maine Community College	A.S. Degree: • Architectural and Civil Engineering Technology	▪ Daniel Moreno	▪ Jalbert Hall	
Eastern Maine Community College	A.S. Degree • Electrical & Automation Technology • Civil Engineering Technology	▪ John Liimakka ▪ Mark Nisbett	▪ Maine Hall	Articulation agreement with UMaine
Bates College	Combined Plan: • Engineering	▪ Nathan Lundblad ▪ Hong Lin	▪ Carnegie Science Hall	3 years at Bates for liberal arts and pre-engineering, then transfer to Case Western, Columbia, Dartmouth, RPI, and Washington University

Appendix F: Scan of K-12 Engineering Programs in Maine

Compiled August 2017

Higher Education Institutions/ Partnerships	Program Name	Program Description
University of Maine (Orono; Pulp & Paper Foundation)	**CONSIDER ENGINEERING**	A 4-day summer session for high aptitude math and science **high school students** offered 3 times in July to groups of 34. The four-day, free of charge, on-campus "camp" gives students opportunities to experience the rewards and challenges of both college life and technical careers. Students participate in about 20 activities and are introduced to nearly two dozen UMaine faculty, engineers and engineering students.
University of Maine (Orono)	**MAINE SUMMER TRANSPORTATION INSTITUTE**	A 2-week long summer session for **middle school students** in the Foster Innovation Center; up to 20 students from the greater Bangor area will get a close look at careers in engineering and transportation.
University of Maine (Orono)/University of Southern Maine (Gorham)	**ENGINEERING EXPO**	Annual week-long community outreach events where engineers, educators, and students gather for hands-on activities and workshops to learn about engineering and what engineers do.
Maine Robotics (Non-profit located in Orono; Camp programs are located Statewide)	**MAINE ROBOTICS CAMP PROGRAM**	Summer day camps that prepare **K-12 students** for the technology world of tomorrow. Offers a variety of programs in STEM fields throughout the summer. 1. Lego Robotics Camp 2. Build Your Own Computer Camp 3. 3D Design & Printing camp 4. Programming Minecraft Camp 5. Introduction to Robotics (Big Bots)

Maine Robotics/ University of Maine/ University of Southern Maine/Maine 4H program/Maine Girl Scout Council/Maine Maritime Academy/ University of Maine at Farmington's Department of Computer Science	**MAINE FIRST LEGO LEAGUE**	The FIRST® LEGO® League is an international STEM (Science, Technology, Engineering & Mathematics) program based out of Manchester New Hampshire. Each year the program hosts a new theme and missions for the robots to complete. Teams have from 2 to 10 children on them and work throughout the season preparing for the tournaments. The team also researches and gives a presentation on a topic within the theme for the year. **K-8 Students & High School Students**. Runs May-September
University of Southern Maine/University of Maine (Orono; Cooperative Extension)	**4-H STEM AMBASSADORS**	4-H STEM Ambassadors are trained USM students who facilitate hands on science, technology, engineering, and math (STEM) with youth **8-14 years old**
Maine School of Science and Mathematics	**MSSM SUMMER CAMP**	Every summer nearly 600 **students ages 10-14** participate in the MSSM Summer Camp. The summer offerings challenge the mind and develop interest in science, technology, engineering and mathematics.
University of Maine (Orono)	**UPWARD BOUND MATH/SCIENCE**	A summer program for **high school students** that will apply project research modeling, where students learn to ask scientific questions and critically consider the possible answers. Students benefit through trial and error, hands on, integrated learning in conjunction with professionals in the field.
Maine Space Grant Consortium/ Perloff Foundation/ Maine Community Foundation	**STEM 4 ME**	Supports projects that encourage students to create real-world solutions to problems in areas such as renewable energy, ecology, automation, space science and sustainable food production, integrating wherever possible the arts and humanities. Eligible applicants are **educators at publicly funded middle schools**, **high schools and academies**
Jackson Laboratory (Bar Harbor)	**SUMMER STUDENT PROGRAM**	Provides high school (and college students) with an opportunity to conduct biomedical research independently with the guidance of staff scientists. [Biomedical Engineering]
Challenger Learning Center of Maine (Bangor)	**LIFT-OFF CAMP**	Three-day science and engineering focused camp for **K-2 students** to prepare for going back to school.

Challenger Learning Center of Maine (Bangor)	**ASTRONAUT ACADEMY**	5-Day program highlights many aspects of astronaut training **Entering Grades 6-8** learn technologies used in space, construct a Mars habitat prototype, re-create the Apollo 13 engineering challenge and web conference with NASA, simulate missions in the Mission Control, Transporter and Space Lab simulators. Off-site day trip to UMaine Orono labs and Emera Astronomy Center planetarium.
Challenger Learning Center of Maine (Bangor)	**ROBOT TECH CAMP**	5-Day program presents working with robots, rovers, circuits, Minecraft and conducting exciting engineering challenges. Campers will also learn to build and program a LEGO We DO Robot, use a 3D printer and even learning coding basics; Campers will also get to use Challenger's mission control, transporter, and space lab simulators. **Entering Grades 2-4**
Challenger Learning Center of Maine (Bangor)	**AFTERSCHOOL DESIGN SQUAD GLOLBAL**	The Design Squad program is open to students in **grades 3-6 students** to explore engineering through fun-packed, high energy, hands-on activities, such as designing and building an emergency shelter or a structure that can withstand an earthquake. Through DSG, students also get a special opportunity: the chance to work alongside a partner club from another country. Partner clubs share their experiences by exchanging design ideas, photos, and videos. Along the way, they develop their global competency by learning more about each other's cultures, communities, and lives.
Challenger Learning Center of Maine (Bangor)	**AFTERSCHOOL LEGO CLUB**	Challenger Afterschool LEGO club combines the excitement of LEGO creation with engineering fun, including the use of Challenger's LEGO WeDo Engineering kits to build and program LEGO robots. For **grades 2-5**

University of Maine/ Beech Hill School Calais Middle-High School/Caravel Middle School /Caribou Middle School/Dedham Middle School/ Ella Lewis-Peninsula schools/ Fort Fairfield Middle School /Fort O'Brien School /Greely Middle School /Hichborn Middle School /Houlton Middle-High School Leonard Middle School /Mattanawcook Junior High /Molly Ockett Middle School /Mountain Valley Middle School /Orono Middle School Penquis Valley School, Milo /Presque Isle Middle School /Reeds Brook Middle School/ Rose M. Gaffney Elementary School /Searsport Middle School /Surry Elementary School / Trenton Elementary School /Troy Howard Middle School /Valley Rivers Middle School	**EXPANDING YOUR HORIZONS CONFERENCE**	Annual Conference that aims to provide a safe and encouraging environment to explore STEM for **middle school girls.** The conference is coordinated by the UMaine Women's Resource Center with support from the Maine Girls Collaborative Project. The University of Maine Cooperative Extension is the event's Healthy Start Partner and the UMaine College of Engineering is the Fun Futures Sponsor. The Maine School of Science and Mathematics summer camp also donated to the conference. The event involves volunteers, including university faculty, staff and more than 35 UMaine students, as well as community professionals. Throughout the day, groups of girls will be guided by UMaine students and staff through three workshops around campus. Two of the workshops are STEM-related, while the third focuses on gender equity and confidence building.
University of Southern Maine/Portland Public Schools/ Portland High School/Deering High School/Casco Bay High School/Make it Happen! Multilingual Multicultural Center of Portland Public Schools/Maine Girls Academy/Portland Housing	**STEM SISTERS (new program)**	Monthly meetings & special events established as a network for young girls in the Greater Portland area to connect to, find support, and be encouraged to pursue pathways through STEM learning and education. Primarily young women in **middle and high school**

Authority/ Study Centers (Kennedy Park)		
Challenger Learning Center of Maine (Bangor)	**MINECRAFT MANIA**	February Vacation Camp Day that bring the computer game to life with Minecraft challenges. Use the Minecraft blocks to complete engineering challenges, pixel art and even try out basic javascript computer programming used in everyone's favorite Minecraft world. **Grades K-5**
Challenger Learning Center of Maine (Bangor)/Girl Scouts of Maine	**RENDEZVOUS WITH A COMET**	Girl Scout Cadettes will carry out a day mission for an out-of-this-world experience. The team will be astronauts, engineers, and mission controllers solving real-world problems and sharing the thrill of discovery on a mission to space. Badge link: Night Owl. **Grade level 6-8**
Challenger Learning Center of Maine (Bangor)	**LEGO ROBOT PROGRAMMING**	Introduction to robotic and integrating sensors. Students learn programming basics and experiment with programming language using LEGO WeDo kits. This program is 90 min. **Grades 2-5**, up to 24 students max
Challenger Learning Center of Maine (Bangor)	**BLAST-OFF**	Young engineers build a rocket using simple materials and learn about the engineering design process, principles of flight and analyzing and communicating results. **Grades K-8**, up to 25 students. 90 minutes-2 hours
Challenger Learning Center of Maine (Bangor)	**ROVERS**	Students engage in an overview of engineering and the design process, followed by the opportunity to design, test and redesign a rover and share results. **Grades 5-8**, up to 25 students. 90 minutes - 2 hours

Challenger Learning Center of Maine (Bangor)	**SIMULATED SPACE MISSIONS**	Mission simulations are learning environments embedded with activities and lessons aligned with national Next Generation Science Standards (NGSS) and Common Core State Standards (CCSS). While students become astronauts and engineers at Challenger Learning Centers they are solving real-world problems as they share the thrill of discovery on missions through the Solar System. (**K-12**)
Project Login/ University of Maine (Orono)	**STUDENT TECH CONFERENCE**	Brings over 800 students (**K-12**) to the University of Maine transform their workshops to a focus on coding and innovation.
Mad Science of Maine (South Portland)/ Partnerships with regional schools)	**BRIXOLOGY**	Engineering Afterschool Program (to be launched January 2017) This 6-week/6 class session is very hands-on and fits perfectly into STEM curriculum. Children build a different engineering-themed project in each class. They explore engineering fields including mechanical, structural, aerospace, nautical, and bioengineering. Use critical thinking, cooperation, and creative problem-solving to test and improve creations. Also, they experience extended learning with a take home project to reinforce each concept. **K-5 graders**
Challenger Learning Center of Maine (Bangor)	**BECOMING A SCIENTIST**	Simulated mission: A team of scientists and engineers has been called in to conduct research aboard the space lab and deploy a new satellite. Students collect data, avert disasters, and ensure the safety of the crew, simultaneously conducting important research for the benefit of humankind. **Grades 5-8**/ Crew Size: 16-28/ Duration: 2-2.5 hours
Code.org/ Educate Maine/ Maine Mathematics & Science Alliance	**CODE STUDIO**	Leading curriculum for **K-12** computer science. There are 1,410 teacher accounts and 47,805 student accounts on Code.org in Maine. Provides professional learning for 252 teachers in CS Fundamentals (**K-5**) and 3 teachers in Computer Science Principles in Maine.
Maine Space Grant Consortium (Augusta)	**MAINE RESEEARCH INTERNSHIPS FOR TEACHERS AND STUDENTS (MERITS) PROGRAM**	Provides summer (six weeks) research opportunities to Maine **high school juniors** in host institutions across the state. Students who are interested in STEM fields and would like to experience "real-time" applications of STEM in a research-focused work world conducting research and technology development should apply.

Maine Mathematics Science and Engineering Talent Search Program (MMSETS) (Orono)	**MASTER AFTERSCHOOL PROGRAM (Reeds Brook Middle School)**	The second semester of an incentive program to grasp STEM concepts with special emphasis on foundation in mathematics (**grades 6-8**)

Appendix G: Building Maine's Engineering Pipeline

Goal

The goal of this initiative is to develop a K-12 pathway to engineering education by increasing interest and competency in STEM-based skill sets, such as engineering literacy, particularly among women and underserved rural students.

Background and Rationale

With tremendous natural resources and hardworking citizens, Maine per capita income is one of the lowest in the Nation because Maine does not have adequate STEM-trained workforce that creates the vast majority of jobs, with the most high-salary jobs being in or related to engineering. Currently, engineering and manufacturing comprise 8% of Maine's GDP ($3.7 billion) and approximately 30% of Maine's engineers are 55 years or older. Projections indicate that Maine will have a shortage of 1,260 engineers by the year 2026 due to both retirements and the growth of engineering within the state. To address this critical shortfall, the Maine engineering workforce should be doubled in the next 10 years and the first step in achieving this objective is creating an engineering pathway in Maine K-12 schools because the quantity and quality of engineering instruction in Maine's K-12 schools is insufficient.[52]

There are several grand challenges in K-12 engineering education including: (1) early engineering exposure and initiation of creative problem solving, (2) teacher training, (3) exposing teachers and students to real world engineering practices, (4) curriculum development, and (5) integrating training opportunities at higher education institutions and industries. A recent survey[53] of STEM related activities in Maine shows 34 such programs are offered across the state by many organizations. These range from 2-hr to 1-day (short-term) tours/simulation engagements to 1- to 2-week hands-on activities (medium-term), to more than 1-month activities (long term). While all these activities have been helpful in raising STEM awareness in Maine, only a few engage students in engineering in a meaningful manner to have any impact on students' interest. These challenges inform the following key research questions: (1) How can engineering literacy be increased in K-12 students and teachers? (2) How can K-12 engineering literacy improve recruitment and retention of students to higher education engineering majors and workforce?

The Plan

The aforementioned challenges will be addressed by assessing the effectiveness of the following six strategies, which are geared toward increasing engineering literacy and awareness at the earliest foundations of education, continuing on through all levels of education, and instilling the next generation of Mainers with the skillsets that they will need to succeed in the 21st-century economy. This effort will begin to combat a result of a preliminary study[52] indicating that over 60% of Maine K-12 schools do not offer engineering-focused education of

[52] Friess, A. (2017). Finding the E in STEM, A survey of Maine teachers and principals regarding engineering education in Maine, internal report, Mechanical Engineering Department, University of Maine.

[53] Meagher, T. (2017). Draft K-12 STEM Programs in Maine.

any type, with this value increasing to 80% in rural areas. Targeting K-12 schools provides an additional advantage to a national problem, only 18% of all engineering students are female, yet with earlier intervention and training the pathway may greatly improve the recruitment and retention of female engineering students. In these educational initiatives, the best practices of the existing programs[2] will be examined for adaptation and implementation statewide to provide short-term and long-term outcomes. In the following objectives, Additive Manufacturing (AM), also known as three dimensional printing (3D), has been used as an example and possible vehicle to address the above grand challenges, fostering inspiration and admiration of engineering in K-20 students. However, other proven examples of engineering engagement can be adopted. The vertical and horizontal integration from elementary school to continuing education through advancing the frontiers of engineering techniques will directly support Maine's economic development.

Strategy 1: INSPIRE (Outreach to K-12 schools)

The goal of this strategy is to inspire Maine students to become engineers by introducing them to the creativity and innovation inherent in engineering, and increasing their knowledge of engineering principles and professions. This will be achieved through coordinated, statewide outreach by Maine's post-secondary engineering programs that builds on existing initiatives, such as Engineering Expo, tours of UMS engineering facilities, and tours of engineering companies.

Strategy 2: ENGAGE (Equip K-12 schools)

This strategy seeks to engage K-12 students in hands-on learning with 3D printers installed at every K-12 school in Maine through a collaborative effort between Maine's post-secondary engineering and education programs, the Maine Department of Education, and K-12 schools. A pilot study will be conducted to train teachers and students from 60 schools in a newly designed engineering module centered around 3D printing. Specific teacher training needs and curriculum will be identified and developed, and the program will expand until every Maine school has trained teachers and grade-appropriate curriculum to support 3D printing and student innovation.

Strategy 3: PREPARE (Educate K-12 teachers)

Improving engineering knowledge among K-12 teachers will improve Maine students' overall STEM proficiency and encourage more of them to seek professions in these fields.

UMaine and USM propose creating four post-secondary credential programs to increase engineering literacy among Maine's K-12 educators:

- 4+1 Engineering/Education B.S./M.S. that pairs engineering education with teacher training
- Certificate in Education for practicing engineers interested in entering K-12 education
- Certificate in Engineering Education for current teachers
- Minor in Engineering for graduates of other disciplines (e.g. science or math) to learn about engineering while pursuing an M.S. in education

By creating four pathways for aspiring engineering educators, UMaine and USM seek to foster a cadre of teachers with demonstrated knowledge of both engineering and education. The Maine Department of Education's *Statewide Strategic Plan for STEM*, released in 2010, calls for eight regional STEM coordinators and research centers to increase student achievement. Graduates of the above programs would be well-suited to fill those roles and others.

Strategy 4: ENABLE (Engineering teaching certificate)

Building on the credentials outlined above, UMaine and USM will work with the Maine Department of Education to develop a teaching certificate that enables engineering professionals to teach in K-12 schools. The real-world knowledge and experiences these individuals bring into the classroom are invaluable tools to inspire, engage, and inform students about engineering.

Strategy 5: SUPPORT (Community colleges pathways)

Maine's community colleges can be gateways for students from diverse backgrounds to enter the engineering field. These institutions can foster their interest and prepare them to enter a bachelor's degree program with a solid academic foundation. To build this pathway, UMaine and USM will partner with Maine's community colleges to develop instructional modules and courses tailored to their students' needs and interests, likely incorporating both on-line and on-site components. Collaborative A.A./B.S. programs will allow students to transition easily from community college into bachelor's degree programs at UMaine and USM.

Strategy 6: PRE-ENGINEERING high school programs

UMaine and USM will work together to build an immersive, summer pre-engineering ("Step Up") program with local school districts to further increase the pipeline of engineering students, particularly in Southern Maine. This residential program will offer a specialized, innovative, interdisciplinary curriculum in engineering, science, and mathematics designed to improve students' competence in these fields. The program will also seek to engage parents so that they see the opportunity that engineering holds for their children.

The curriculum will consist of industry-defined engineering applications in multiple fields. A key component of the program will be hands-on activities and inquiry-based exploration, an approach proven to enhance students' enthusiasm for engineering, science, and mathematics. Math and engineering concepts will be reinforced and used to analyze and interpret the data obtained from the research projects. Students will also learn scientific writing and oral presentations skills. Having increased students' competence and interest in engineering, science and mathematics, the program will encourage students to pursue engineering careers by connecting them with role models and mentors in engineering-related fields, and increasing their awareness of exciting opportunities for postsecondary education and engineering related careers. Students also will participate in sessions on leadership development, interview skills, and resume writing.

This initiative will increase interest among the many place-bound students in Southern Maine. Growing the number of Maine students pursuing engineering degrees will ensure there are enough students to fill programs at both UMaine and USM, even as demographic trends shrink

the overall number of high school graduates. Required resources will include a program coordinator, administrative support, operating funds, and scholarships for participating students. Corporate sponsorships will be sought to partially support program expenses.

Timeline and Investment

UMaine and USM propose launching this initiative as soon as funds become available. The estimated cost of the above activities is $982,000 per year for staff coordinators, faculty training and program development, technical assistance, and equipment; costs that over time will be offset by corporate sponsorships, grants, and other institutional revenue sources.

	ANNUAL COST
K-12 OUTREACH MANAGER	$100,000
PRE-ENGINEERING SUMMER PROGRAM COORDINATOR (ALSO SERVES AS USM LIAISON WITH K-12 OUTREACH MANAGER)	$80,000
TECHNICIAN	$90,000
FACULTY FOR TRAINING AND PROGRAM DEVELOPMENT	$270,000
FACULTY SUMMER SALARIES	$22,000
PRE-ENGINEERING SUMMER PROGRAM OPERATING FUNDS AND STUDENT SCHOLARSHIPS	$250,000
GRADUATE STUDENTS	$50,000
UNDERGRADUATE STUDENTS	$40,000
3D PRINTERS (60)	$30,000
PROGRAM EXPENSES	$50,000
TOTAL	**$982,000**

Expected Impacts

This proposed plan will:

- Create engineering literacy in every Maine K-12 school through access to engineering tools and related experiential coursework impacting tens of thousands of students, including female, first generation, rural, and underrepresented minority students.
- Prepare 500 STEM-educated K-12 teachers within 10 years to lead their school districts in developing STEM programs and contributing to the national call for building 1,000

STEM schools, training 100,000 STEM teachers,[54] and graduating 1,000,000 additional STEM graduates over the next decade.[55]

- Enable engineering graduates and professionals to teach in Maine K-12 schools.
- It is expected that the above efforts will contribute to building a strong pathway for increasing the number of engineering students in Maine higher education programs with direct impact in engineering workforce development and economy.
- There will be a vibrant pre-engineering high school pathways program in partnership with local school districts.
- The percentage of Maine high school seniors pursuing engineering (reported on the SAT) will consistently exceed the national average.
- Transfers from the Maine Community College System into engineering programs at UMaine and USM will increase.

Prior Awards and Recognitions

The project team has extensive experiences in design and implementation of engineering related activities for K-12 schools, as demonstrated below, and is working with a vast network of K-12 schools.

1. **"Engineering Innovative Solutions to Stormwater Problems through Diverse Community Participation"** NSF EPSCoR Track-3 Award # 1348266; $735,315; 10/1/2013-9/30/2016, PI: M. Musavi, Co-PIs: A. Abedi, C. James, J. Vetelino, J. Peckenham.

This is the funding source for the SMART project described in this document.

Intellectual Merit:This program is empowering female and minority high school students, and their teachers and communities, to create innovative local solutions to a pervasive environmental problem, stormwater. The program is actively engaging participants with STEM professionals in an inquiry- and project-based instructional environment. Using the latest sensor technology for data collection and computer modeling for data analysis, STEM-underrepresented high school and college students will address the widespread problem of stormwater management. **Key Findings**: The initial findings and interviews have shown that close mentoring of high school students and exposure to university based projects and environment can positively impact students' attitude towards higher education especially in STEM areas. This perception was more prominent among underrepresented students, who initially didn't have any knowledge of STEM education and/or any motivation to continue in

[54] Prepare and Inspire: K-12 Education in Science, Technology, Engineering, and Mathematics (STEM) for America's Future, President's Council of Advisors on Science and Technology (PCAST), 2010.

[55] Engage to Excel: Producing one million additional College Graduates with Degrees in Science, Technology, Engineering, and Mathematics, President's Council of Advisors on Science and Technology (PCAST), 20112.

higher education due to their high school performance or family reasons. About 75% of the 60-80 participating students in the first 2 years of this project were female, African American, Hispanic, or Native American, many of whom are socioeconomically disadvantaged and/or their parents did not have higher education. After participation in the activities of this project at UMaine and follow up school activities, students exhibited a much higher level of confidence in higher education and their ability to succeed. **Broader Impact**: Engaging a highly diverse group of project participants will increase our understanding of effective community inclusive learning methods. This research will benefit society in that it aims to offer a viable and cost-effective solution to the problem of stormwater, while engaging a diversity of students in STEM projects and careers in their communities. The project model is designed to be easily replicable and scalable nation-wide. **Products**: Two conference publications [31, 32], several conference presentations, several online press releases, a wireless sensor network for collecting watershed data and operational manual have resulted from the project.

2. **"INCLUDES Collaborative: Creating a Diverse STEM Pathway with Community Water Research"** NSF INCLUDES Award #1649346, $295,738, 01/01/2017-12/31/2018, PI: M. Musavi (UMaine)., Co-PIs: V. Bhethanabotla (Florida South Univ), L. Brown (City College of NY), C. James (Bangor HS), and V. White (Mississippi State Univ).

Intellectual Merit: This project will address the need for research on mechanisms for change, collaboration, and negotiation regarding the greater participation of under-represented groups in the STEM workforce. Previous research has shown that environmental and societal based projects have great potential to engage the interests of women and minority students. Other research points to the great impact that invested mentors and role models have on women and racial minorities. However, most isolated programs cannot address the complex pathway to STEM careers. The preliminary model for this program will test the integration of previous findings implemented with the collective impact process. It will investigate the most effective collective process for aligning efforts and impacting K-12 students using programs rooted in community-based STEM solutions, with collaborative partner involvement at key transition grade levels. **Broader Impacts:** This project will expand on a current broadening participation effort to develop a regional and national community of diverse STEM learners. This collaborative community will consist of higher education faculty and students, K-12 students, their caregivers, mentors, educators, stormwater districts, state and national environmental protection agencies, departments of education, and other for-profit and non-profit organizations. The focus of this collaborative effort is to diversify the face of STEM education, focused on particular challenges for women and underrepresented minorities, while creating awareness and addressing a vitally important community environmental issue: stormwater contamination and management and its effect on water quality in both fresh and salt water environments. The globally important issues of water quality and stormwater unifies students and easily translates anywhere to active, community-connected research.

3. **"Finding the E in STEM: Survey of Engineering Instruction in Maine' K-12 Schools"** UMaine 2016 Research Reinvestment Funds (RRF) Seed Grant Program, PI: Al. Friess, Co-PIS: M. Davis (USM), S. Templeton (Maine Dept of Education), Luke Shorty (MSSM), M. Musavi (UMaine), and C. Mason (UMaine), $99,902, 07/01/2016-06/30/2017.

4. **IEEE-USA 2014 K-12 STEM Literacy Teacher-Engineer Partnership Award,** Presented to M. Musavi and C. James (Bangor High School).

5. **Bangor High School and Thornton Academy STEM Academies**: The project team has worked with the above two high schools to develop the first two STEM academies in Maine integrating engineering courses and is working with several other schools to develop similar STEM programs.

Appendix H: Detailed Enrollment and Budget Projections

UMaine Enrollment and Revenue

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Number of Undergraduates - TOTAL	1819	1919	2019	2119	2219	2319	2419	2519	2619	2719	2819
In-State	1346	1303	1246	1271	1331	1391	1451	1511	1571	1631	1691
Out-of-State	293	430	579	636	666	696	726	756	786	816	846
NEBHE	129	136	143	148	155	162	169	176	183	190	197
International	45	48	50	53	55	58	60	63	65	68	70
Canadian	5	4	0	11	11	12	12	13	13	14	14
Residency Status											
In-State	74.0%	67.9%	61.7%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Out-of-State	16.1%	22.4%	28.7%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
NEBHE	7.1%	7.1%	7.1%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
International	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Canadian	0.3%	0.2%	0.0%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Tuition rate - increase over prior year											
In-State, NEBHE, & Canadian	---	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Out-of-State & International	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Tuition per SCH											
In-State	$286	$289	$292	$295	$298	$301	$304	$307	$310	$313	$316
Out-of-State & International	$932	$960	$989	$1,019	$1,050	$1,082	$1,114	$1,147	$1,181	$1,216	$1,252
NEBHE & Canadian	$458	$463	$468	$473	$478	$483	$488	$493	$498	$503	$508
Tuition weighted by residency %	$419	$469	$522	$544	$556	$568	$581	$594	$607	$621	$635
Credits/student/year	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
Gross tuition revenue	$22,178,885	$26,190,320	$30,669,014	$33,544,618	$35,902,532	$38,330,287	$40,898,275	$43,541,923	$46,261,230	$49,135,321	$52,090,892
Discount for UMaine financial aid (Table prepared by UMaine OIR, 11/29/17)	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%
Net tuition revenue	**$16,190,586**	**$19,118,934**	**$22,388,380**	**$24,487,571**	**$26,208,849**	**$27,981,110**	**$29,855,741**	**$31,785,603**	**$33,770,698**	**$35,868,784**	**$38,026,351**
Change in net tuition revenue	**---**	**$2,928,348**	**$6,197,794**	**$8,296,985**	**$10,018,263**	**$11,790,524**	**$13,665,155**	**$15,595,017**	**$17,580,112**	**$19,678,198**	**$21,835,765**

USM Enrollment and Revenue

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Number of Undergraduates - TOTAL	232	252	272	292	312	332	352	372	392	412	432
In-State	202	219	197	253	269	286	303	319	335	352	368
Out-of-State	29	32	28	38	41	44	48	51	55	58	62
NEBHE	0	0	0	0	0	0	0	0	0	0	0
International	0	0	0	0	0	0	0	0	0	0	0
Canadian	1	1	1	1	1	1	2	2	2	2	2
Residency Status											
In-State	87.2%	87.0%	86.8%	86.6%	86.4%	86.2%	86.0%	85.8%	85.6%	85.4%	85.2%
Out-of-State (assumes 0.2% annual growth)	12.4%	12.6%	12.8%	13.0%	13.2%	13.4%	13.6%	13.8%	14.0%	14.2%	14.4%
NEBHE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
International	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Canadian	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Tuition rate - increase over prior year											
In-State, NEBHE, & Canadian	---	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Out-of-State & International	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Tuition per SCH											
In-State	$262	$265	$268	$271	$274	$277	$280	$283	$286	$289	$292
Out-of-State & International	$689	$710	$731	$753	$776	$799	$823	$848	$873	$899	$926
NEBHE & Canadian	$419	$423	$427	$431	$435	$439	$443	$447	$451	$456	$461
Tuition weighted by residency %	$316	$322	$328	$334	$341	$348	$355	$362	$369	$376	$384
Credits/student/year	23.5	23.5	23.5	23.5	25	25	25	25	26	26	26
Gross tuition revenue	$1,722,832	$1,906,884	$2,096,576	$2,291,908	$2,659,800	$2,888,400	$3,124,000	$3,366,600	$3,760,848	$4,027,712	$4,313,088
Discount for USM financial aid (estimate)	24%	24%	24%	24%	24%	24%	24%	24%	24%	24%	24%
Net tuition revenue	**$1,309,352**	**$1,449,232**	**$1,593,398**	**$1,741,850**	**$2,021,448**	**$2,195,184**	**$2,374,240**	**$2,558,616**	**$2,858,244**	**$3,061,061**	**$3,277,947**
Change in net tuition revenue	**---**	**$139,880**	**$284,046**	**$432,498**	**$712,096**	**$885,832**	**$1,064,888**	**$1,249,264**	**$1,548,892**	**$1,751,709**	**$1,968,595**

UMaine Expenses

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Faculty - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Full Professor	$135,000	$139,050	$143,222	$147,518	$151,944	$156,502	$161,197	$166,033	$171,014	$176,144	$181,429
Assistant Professor	$88,000	$90,640	$93,359	$96,160	$99,045	$102,016	$105,077	$108,229	$111,476	$114,820	$118,265
Lecturer	$67,000	$69,010	$71,080	$73,213	$75,409	$77,671	$80,002	$82,402	$84,874	$87,420	$90,042
Professional Staff - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	$62,000	$63,860	$65,776	$67,749	$69,782	$71,875	$74,031	$76,252	$78,540	$80,896	$83,323
Administrator (Associate Dean for Research)											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	$170,000	$175,100	$180,353	$185,764	$191,336	$197,077	$202,989	$209,079	$215,351	$221,811	$228,466
Clerical Staff - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	$30,000	$30,900	$31,827	$32,782	$33,765	$34,778	$35,822	$36,896	$38,003	$39,143	$40,317
Benefit rate for faculty & staff	53.0%	53.4%	53.6%	53.9%	54.2%	54.5%	54.8%	55.1%	55.4%	55.7%	56.0%
Teaching Assistant											
% increase in stipend over prior year	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
% increase in tuition over prior year	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
% increase in health insurance over prior year	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Stipend (9 mo.)	$18,500	$19,055	$19,627	$20,216	$20,822	$21,447	$22,090	$22,753	$23,436	$24,139	$24,863
18 cr. tuition	$7,722	$7,954	$8,193	$8,439	$8,692	$8,953	$9,222	$9,499	$9,784	$10,078	$10,380
1/2 Health Insurance	$1,334	$1,374	$1,415	$1,457	$1,501	$1,546	$1,592	$1,640	$1,689	$1,740	$1,792
Total cost teaching assistant	$27,556	$28,383	$29,235	$30,112	$31,015	$31,946	$32,904	$33,892	$34,909	$35,957	$37,035
Annual salary with benefits											
Full Professor (Department Chair)	$206,550	$213,303	$219,988	$227,030	$234,297	$241,796	$249,533	$257,517	$265,756	$274,257	$283,029
Assistant Professor	$134,640	$139,042	$143,400	$147,990	$152,727	$157,615	$162,659	$167,863	$173,233	$178,775	$184,493
Lecturer	$102,510	$105,861	$109,179	$112,674	$116,281	$120,002	$123,842	$127,805	$131,894	$136,113	$140,466
Administrator (Associate Dean for Research)	$260,100	$268,603	$277,022	$285,890	$295,041	$304,483	$314,227	$324,281	$334,655	$345,360	$356,407
Professional staff	$94,860	$97,961	$101,032	$104,266	$107,603	$111,047	$114,600	$118,267	$122,051	$125,955	$129,984
Clerical staff	$45,900	$47,401	$48,886	$50,451	$52,066	$53,732	$55,452	$57,226	$59,057	$60,946	$62,895

UMaine Expenses – continued

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Cumulative E&G Positions Added (FY19 & Beyond)											
Full Professor	---	0	1	1	2	2	3	3	4	4	5
Assistant Professor	---	3	6	9	12	15	18	21	24	27	30
Lecturer	---	1	2	3	4	5	6	7	8	9	10
Administrator (Associate Dean for Research)	---	0	1	1	1	1	1	1	1	1	1
Professional staff	---	1	1	2	2	2	2	3	3	3	4
Clerical staff	---	1	1	1	2	2	2	3	3	3	4
Teaching Assistant	---	4	8	12	16	20	24	28	32	36	40
Number of faculty	79	83	88	92	97	101	106	110	115	119	124
Number of teaching assistants	7	11	15	19	23	27	31	35	39	43	47
Undergraduate student/faculty ratio	**23.0**	**23.1**	**22.9**	**23.0**	**22.9**	**23.0**	**22.8**	**22.9**	**22.8**	**22.8**	**22.7**
Undergraduate student/TA ratio	**259.9**	**174.5**	**134.6**	**111.5**	**96.5**	**85.9**	**78.0**	**72.0**	**67.2**	**63.2**	**60.0**
Cumulative Salaries Added w/Benefits											
Full Professor	---	$0	$219,988	$227,030	$468,594	$483,592	$748,599	$772,551	$1,063,024	$1,097,028	$1,415,145
Assistant Professor	---	$417,126	$860,400	$1,331,910	$1,832,724	$2,364,225	$2,927,862	$3,525,123	$4,157,592	$4,826,925	$5,534,790
Lecturer	---	$105,861	$218,358	$338,022	$465,124	$600,010	$743,052	$894,635	$1,055,152	$1,225,017	$1,404,660
Administrator (Associate Dean for Research)	---	$0	$277,022	$285,890	$295,041	$304,483	$314,227	$324,281	$334,655	$345,360	$356,407
Professional staff	---	$97,961	$101,032	$208,532	$215,206	$222,094	$229,200	$354,801	$366,153	$377,865	$519,936
Clerical staff	---	$47,401	$48,886	$50,451	$104,132	$107,464	$110,904	$171,678	$177,171	$182,838	$251,580
SUBTOTAL	---	**$668,349**	**$1,725,686**	**$2,441,835**	**$3,380,821**	**$4,081,868**	**$5,073,844**	**$6,043,069**	**$7,153,747**	**$8,055,033**	**$9,482,518**
Teaching assistants	---	$113,532	$233,880	$361,344	$496,240	$638,920	$789,696	$948,976	$1,117,088	$1,294,452	$1,481,400
ONGOING INVESTMENT NEEDED IN ENGINEERING	**---**	**$781,881**	**$1,959,566**	**$2,803,179**	**$3,877,061**	**$4,720,788**	**$5,863,540**	**$6,992,045**	**$8,270,835**	**$9,349,485**	**$10,963,918**
BALANCE AVAILABLE FOR INVESTMENT IN CAMPUS	**---**	**$2,146,467**	**$4,238,228**	**$5,493,806**	**$6,141,202**	**$7,069,736**	**$7,801,615**	**$8,602,972**	**$9,309,277**	**$10,328,713**	**$10,871,847**
TOTAL AVAILABLE FOR INVESTMENT	**---**	**$2,928,348**	**$6,197,794**	**$8,296,985**	**$10,018,263**	**$11,790,524**	**$13,665,155**	**$15,595,017**	**$17,580,112**	**$19,678,198**	**$21,835,765**

USM Expenses

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Faculty - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Full Professor	$127,500	$131,325	$135,265	$139,323	$143,502	$147,807	$152,242	$156,809	$161,513	$166,359	$171,349
Assistant Professor	$78,250	$80,598	$83,015	$85,506	$88,071	$90,713	$93,435	$96,238	$99,125	$102,099	$105,161
Lecturer	$67,000	$69,010	$71,080	$73,213	$75,409	$77,671	$80,002	$82,402	$84,874	$87,420	$90,042
Professional Staff - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	$62,000	$63,860	$65,776	$67,749	$69,782	$71,875	$74,031	$76,252	$78,540	$80,896	$83,323
Clerical Staff - Starting Base Salary											
% Increase over prior year	---	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Base salary	$30,000	$30,900	$31,827	$32,782	$33,765	$34,778	$35,822	$36,896	$38,003	$39,143	$40,317
Benefit rate for faculty & staff	53.0%	53.4%	53.6%	53.9%	54.2%	54.5%	54.8%	55.1%	55.4%	55.7%	56.0%
Teaching Assistant											
% increase in stipend over prior year	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
% increase in tuition over prior year	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
% increase in health insurance over prior year	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stipend (9 mo.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18 cr. tuition	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1/2 Health Insurance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total cost teaching assistant	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Annual cost for one undergraduate grader	$1,000	$1,030	$1,061	$1,093	$1,126	$1,159	$1,194	$1,230	$1,267	$1,305	$1,344
Annual salary with benefits											
Full Professor	$195,075	$201,453	$207,767	$214,418	$221,281	$228,363	$235,670	$243,211	$250,991	$259,020	$267,305
Assistant Professor	$119,723	$123,637	$127,512	$131,594	$135,806	$140,152	$144,637	$149,265	$154,040	$158,967	$164,052
Lecturer	$102,510	$105,861	$109,179	$112,674	$116,281	$120,002	$123,842	$127,805	$131,894	$136,113	$140,466
Professional staff	$94,860	$97,961	$101,032	$104,266	$107,603	$111,047	$114,600	$118,267	$122,051	$125,955	$129,984
Clerical staff	$45,900	$47,401	$48,886	$50,451	$52,066	$53,732	$55,452	$57,226	$59,057	$60,946	$62,895

USM Expenses – continued

	FY18	Projected FY19	Projected FY20	Projected FY21	Projected FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26	Projected FY27	Projected FY28
Cumulative E&G Positions Added (FY19 & Beyond)											
Full Professor	3										
Assistant Professor	3	1	2	2	3	4	5	5	6	6	7
Lecturer	1	0	0	0	0	0	1	1	1	1	1
Professional staff	1	0	0	1	1	1	1	1	1	1	1
Clerical staff	1	0	0	0	0	1	1	1	1	1	1
Teaching Assistant	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of faculty	7	8	9	9	10	11	13	13	14	14	15
Number of teaching assistants	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative undergraduate graders added	0	2	2	3	3	4	4	5	5	6	6
Undergraduate student/faculty ratio	**33.1**	**31.5**	**30.2**	**32.4**	**31.2**	**30.2**	**27.1**	**28.6**	**28.0**	**29.4**	**28.8**
Undergraduate student/TA ratio	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Cumulative Salaries Added w/Benefits											
Full Professor (Department Chair)	$585,225	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Assistant Professor	$359,169	$123,637	$255,024	$263,188	$407,418	$560,608	$723,185	$746,325	$924,240	$953,802	$1,148,364
Lecturer	$102,510	$0	$0	$0	$0	$0	$123,842	$127,805	$131,894	$136,113	$140,466
Professional staff	$94,860	$0	$0	$104,266	$107,603	$111,047	$114,600	$118,267	$122,051	$125,955	$129,984
Clerical staff	$45,900	$0	$0	$0	$0	$53,732	$55,452	$57,226	$59,057	$60,946	$62,895
SUBTOTAL	**$1,187,664**	**$123,637**	**$255,024**	**$367,454**	**$515,021**	**$725,387**	**$1,017,079**	**$1,049,623**	**$1,237,242**	**$1,276,816**	**$1,481,709**
Teaching assistants	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Undergraduate graders	$0	$2,060	$2,122	$3,278	$3,377	$4,637	$4,776	$6,149	$6,334	$7,829	$8,063
ONGOING INVESTMENT NEEDED IN ENGINEERING	**$1,187,664**	**$125,697**	**$257,146**	**$370,732**	**$518,398**	**$730,024**	**$1,021,855**	**$1,055,772**	**$1,243,576**	**$1,284,645**	**$1,489,772**
BALANCE AVAILABLE FOR INVESTMENT IN CAMPUS	**$121,688**	**$14,183**	**$26,900**	**$61,766**	**$193,698**	**$155,808**	**$43,033**	**$193,492**	**$305,316**	**$467,064**	**$478,823**
TOTAL AVAILABLE FOR INVESTMENT	**$1,309,352**	**$139,880**	**$284,046**	**$432,498**	**$712,096**	**$885,832**	**$1,064,888**	**$1,249,264**	**$1,548,892**	**$1,751,709**	**$1,968,595**

Appendix I: Industry Feedback

On February 16, 2018, fourteen engineering industry leaders gathered at USM with seven UMS staff to provide feedback on a draft plan to grow engineering in the UMS system. Three additional industry leaders provided feedback by email. The professionally facilitated feedback session was a follow-up to a focus group one year earlier with many of the same participants. The following is a summary of the group's feedback.

Attendees

Industry

In-person

1. Mitch Sanborn, Lanco Integrated
2. Lisa Martin, Manufacturers Association of Maine
3. Brent Bridges, Woodard & Curran
4. Stephen Nicholson, Bath Iron Works
5. Beth Sturtevant, CCB, Inc
6. Kevin McDonnell, Pratt and Whitney
7. Karl Hoose, Valt Enterprises
8. Steve Swan, Texas Instruments
9. Adam Henckler, Portsmouth Naval Shipyard
10. Kent Peterson, Fluid Imaging
11. Stephen Von Vogt, Maine Marine Composites
12. George Harris, Micronetixx Technologies
13. Clifton Greim, Harriman Associates
14. Chris Joyce, Texas Instruments

Feedback by email

15. Bryan Bozsik, Alere
16. Michele Meggison, Sappi
17. Eugene Miller, Bath Iron Works

UMS Faculty

18. Mariusz Jankowski, USM
19. Mohamad Musavi, UMaine

UMS Staff

20. Terry Shehata, USM
21. Samantha Warren, UMS
22. Ainsley Wallace, USM
23. Corey Hascall, USM
24. Chanel Lewis, USM

Consulting Staff

25. Carole Martin, Carole Martin Consulting
26. Michael LeVert, 45 North Research

General Feedback

Overall, industry leaders were supportive of the unified vision and strategies presented in the Plan. They appreciated the collaborative approach to grow engineering system-wide, and made clear that they both supported and wanted more collaboration between the two campuses. They endorsed both the spirit and substance of the major components of the Plan, while noting several concerns and suggestions. Multiple participants voiced their endorsement of the skills and knowledge that UMS engineering graduates learn. And, as with last year's focus group, the group affirmed that the primary problem to address is the low of production of engineers from UMS compared to the need, which the plan addresses.

However, while the Plan as written was supported overall, industry leaders made clear that the implementation of the Plan is just as critical as the vision. Closely involving industry in the details and nuances of implementation will be key.

Several industry leaders also mentioned the critical role that the State of Maine has in ensuring the vision of the Plan is successfully implemented. There was a general feeling that the state's economic development professionals don't fully grasp the link between economic growth and higher education, including the positive economic impact of growing the system's engineering capacity. This Plan is highly dependent on facility investments, which can only be accomplished with state support.

There was a general consensus that the Plan should more directly target a more diverse population of students. Industry leaders felt the summary of the plan did not adequately mention several populations of potential engineers: "non-traditional" students who have some college but have not finished a degree; working professionals, perhaps with a B.A. in a different field, who are place-bound with professional commitments that preclude going to class full-time or during working hours; women; minorities; New Americans. This feedback was framed in several ways: as an opportunity to engage more potential engineers; as a way to increase diversity within the industry, resulting in tangible benefits to engineering companies; and as an appropriate role for USM, particularly for those populations who are place-bound in Greater Portland and unable to attend a full-time degree program. Industry leaders suggested a more explicit focus on these groups and more night and online classes as solutions.

Several industry leaders also made the point that there is a need for engineers with advanced degrees, with the suggestion for demand-driven selective masters programs.

New Programming

Industry leaders were generally supportive of the three new programs planned for USM, with the most support for computer engineering and several concerns raised about the demand for Industrial Engineers.

There was broad consensus that expanding Electrical Engineering at USM to include Computer Engineering was smart and needed. Several leaders suggested that software engineers were also needed, and therefore missing from the Plan.

There was not a lot of discussion about the proposed Engineering Science; however, one participant supported the general nature of the program as a way to keep the overall programming flexible and adaptable as the industry changes over time.

Most of the conversation centered around Industrial Engineering. Industrial Engineering is seen as a valuable skillset, but there were questions about the size of the demand for Industrial Engineers. Several companies noted that while they employ Industrial Engineers today and have a need for more in the future, demand is not at the same scale as for Mechanical or Electrical Engineers. The question was raised whether the industry could absorb a fully implemented program with 30 Industrial Engineering graduates a year.

On the other hand, the Associated Manufacturers of Maine noted that Industrial Engineering consultants are their most requested service from Maine businesses. These requests are generally from small businesses who need the broad-based systems-level expertise that Industrial Engineers have.

The point was also made that Industrial Engineers may be more in demand for newer companies who are building new manufacturing facilities, as opposed to companies with well-established production processes. Health care and food retail were mentioned as industries where Industrial Engineers may be in demand.

It was also noted that Industrial Engineering directly ties to increasing diversity because it attracts a different population of students.

K-12 Pipeline

There was strong agreement that the K-12 pipeline was critical to building tomorrow's workforce. Leaders noted that without the proper "hooks," students may engage with engineering during K-12 but then leave for college out-of-state. This concern raised the importance of several elements not explicitly in the Plan but critical to successful implementation, such as dual enrollment programs where high school students can receive college credit and immersive on-campus experiences for high school students.

The group noted that there are really three groups that need to be engaged: students, teachers, and parents. Industry leaders recognized their own central role in supporting this pipeline by mentoring students (and teachers) and generating excitement about engineering. This includes getting teachers to tour local businesses so they see first-hand the opportunity for their students (although it was noted how challenging that is given how busy teachers are).

The need for collaboration between companies to tell their stories together was acknowledged. (Also noted were current efforts by the Associated Manufacturers of Maine to highlight Maine manufacturing companies.)

There was strong endorsement of the plan to provide 3-D printers to students as an affordable way to show students a "cool" and effective engineering tool.

Several leaders referenced Maine's Career and Technical Education schools as 'diamonds in the rough" that could play a central role in these efforts.

Internships

Industry leaders strongly supported the need for an effective and streamlined internship and coop program. There was consensus that the current system of internships, particularly at USM, has been "frustrating," and "unpredictable," at times. There is no central person or department to reach out to for internships and no unified set of requirements or standards. This is in contrast to other engineering schools where the experience is smoother and more standardized. The need for a single-entry point for finding and hiring an intern, system-wide, was endorsed.

Several leaders expressed concern with the lack of "work-ready" skills (i.e., "soft" skills) that interns come to their companies with. They noted that the campuses have a responsibility to ensure that potential interns understand what it means to work in a professional environment.

One participant mentioned that one of the more successful internship programs of the past used a third party to screen interns and substantially diminish the time it took for a company to locate and hire an intern.

There was general agreement that businesses should pay for interns – and not get them for free from the university. However, there was agreement that a sliding scale may be appropriate for smaller companies. Further, there was an acknowledgement that internships take a variety of forms, from a fully-paid 12-month internship (i.e., a "coop") to internships that carry college credit and/or fulfill a "capstone" requirement. Clarity and consistency of the types and intents of these internships will be important as the Plan moves forward.

Appendix J: Legislative Resolve

'Resolve, Directing the University of Maine System to Study the Opportunities to Increase Engineering Capacity in Southern Maine'

Emergency preamble. Whereas, acts and resolves of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

Whereas, engineers are essential to Maine's economy, providing an estimated $4,000,000,000 of direct and indirect impact on the State's gross domestic product annually; and

Whereas, 27% of Maine's engineering and scientific workforce is 55 years of age or older and the State is currently producing less than half of the engineering graduates needed to meet the needs of businesses and industry in the coming decade; and

Whereas, this resolve directs the University of Maine System to study the opportunities to strengthen the capacity of the engineering programs in southern Maine to meet the workforce, applied research and technical assistance needs of southern Maine's businesses and industry; and

Whereas, the study must be initiated before the 90-day period expires in order that the study may be completed and a report submitted in time for submission to the next legislative session; and

Whereas, in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore, be it

Sec. 1. Study established. Resolved: That the University of Maine System, referred to in this resolve as "the system," shall develop recommendations for strengthening educational programs to better meet the current and projected engineering workforce, applied research and technical assistance needs of southern Maine businesses and industry; and be it further

Sec. 2. Duties. Resolved: That the system, with input from and in consultation with faculty, staff, students and industry, community and secondary and postsecondary education partners, shall:

1. Identify the current and projected engineering workforce, applied research and technical assistance needs of southern Maine businesses and industry;

2. Review enrollment trends and existing capacity including but not limited to faculty and facilities of the engineering department and related nonacademic programs and partnerships at the University of Southern Maine;

3. Identify future growth opportunities for the University of Southern Maine to better meet the region's engineering needs through program improvements and new and expanded institutional and industrial partnerships including strengthened synergy with the University of Maine's engineering program;

4. Identify opportunities to strengthen Maine's engineering workforce by increasing engineering program enrollment and access among traditional and nontraditional students at the University of Southern Maine;

5. Review best practices from other institutions of higher education that would inform how the University of Southern Maine could best respond to the engineering needs of southern Maine businesses and industry; and

6. Prepare recommendations for strengthening engineering capacity to meet current and projected workforce, applied research and technical assistance needs of southern Maine businesses and industry, including program improvements and new initiatives at the University of Southern Maine to increase student recruitment and retention and strengthen opportunities for students and industry including through internships and cooperative education experiences; and be it further

Sec. 3. Report. Resolved: That the system shall report its findings and recommendations to its board of trustees by November 20, 2017. The system shall submit a report of its findings and recommendations, including recommended legislation, to the Joint Standing Committee on Education and Cultural Affairs and the Joint Standing Committee on Labor, Commerce, Research and Economic Development by December 31, 2017. After reviewing the report, the Joint Standing Committee on Education and Cultural Affairs may report out a bill to implement recommendations contained in the report to the Second Regular Session of the 128th Legislature.

Emergency clause. In view of the emergency cited in the preamble, this legislation takes effect when approved.

SUMMARY

This amendment is the minority report of the committee, changes the bill to a resolve and requires the University of Maine System to study the existing and emerging engineering workforce, applied research and technical assistance needs of southern Maine businesses and industry. The study must include recommendations to increase the engineering capacity specifically in southern Maine by strengthening academic and related nonacademic programs at the University of Southern Maine. The University of Maine System is required to report its findings and recommendations to its board of trustees by November 20, 2017 and to submit a report to the Joint Standing Committee on Education and Cultural Affairs and the Joint Standing Committee on Labor, Commerce, Research and Economic Development by December 31, 2017. After reviewing the report, the Joint Standing Committee on Education and Cultural Affairs may report out a bill to implement recommendations contained in the report to the Second Regular Session of the 128th Legislature. The cost of the study will be absorbed using existing University of Maine System resources.

Appendix K: UMaine-USM Engineering Planning Committee

Name	Title	Institution
Mariusz Jankowski	Professor of Electrical Engineering and Department of Engineering Chair	USM
Carlos Lück	Associate Professor of Electrical Engineering	USM
Andrew Anderson	Professor of Technology	USM
Mustafa Guvench	Professor of Electrical Engineering	USM
Ainsley Wallace	USM Foundation Vice President	USM
Meghan Cadwallader	Director of Educational Partnerships	USM
James Graves	Dean of the College of Science, Technology, and Health	USM
Dana Humphrey	Dean of Engineering	UMaine
James (Jake) Ward	Vice President for Innovation and Economic Development	UMaine
Mohamad Musavi	Associate Dean of Engineering; Professor of Electrical and Computer Engineering	UMaine
Clay Wheeler	Associate Director of Forest Bioproducts Research Institute; Professor of Chemical Engineering	UMaine
Aria Amirbahman	Professor of Environmental Engineering	UMaine
Terry Shehata	Maine Economic Improvement Coordinator / Economic Development Officer	MEIF (USM)

With support and participation from Samantha Warren, University of Maine System; Margaret Vishneau, Tracey Meagher, and Jared Lank from the Muskie School of Public Service, USM; and research and report assistance from Michael LeVert and Catherine deLutio from 45 North Research.

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

1. NAME OF ITEM: Early College Progress

2. INITIATED BY: Gregory G. Johnson, Chair

3. BOARD INFORMATION: **X** **BOARD ACTION:**

4. OUTCOME: **BOARD POLICY:**
Increase Enrollment
Improve Student Success and Completion

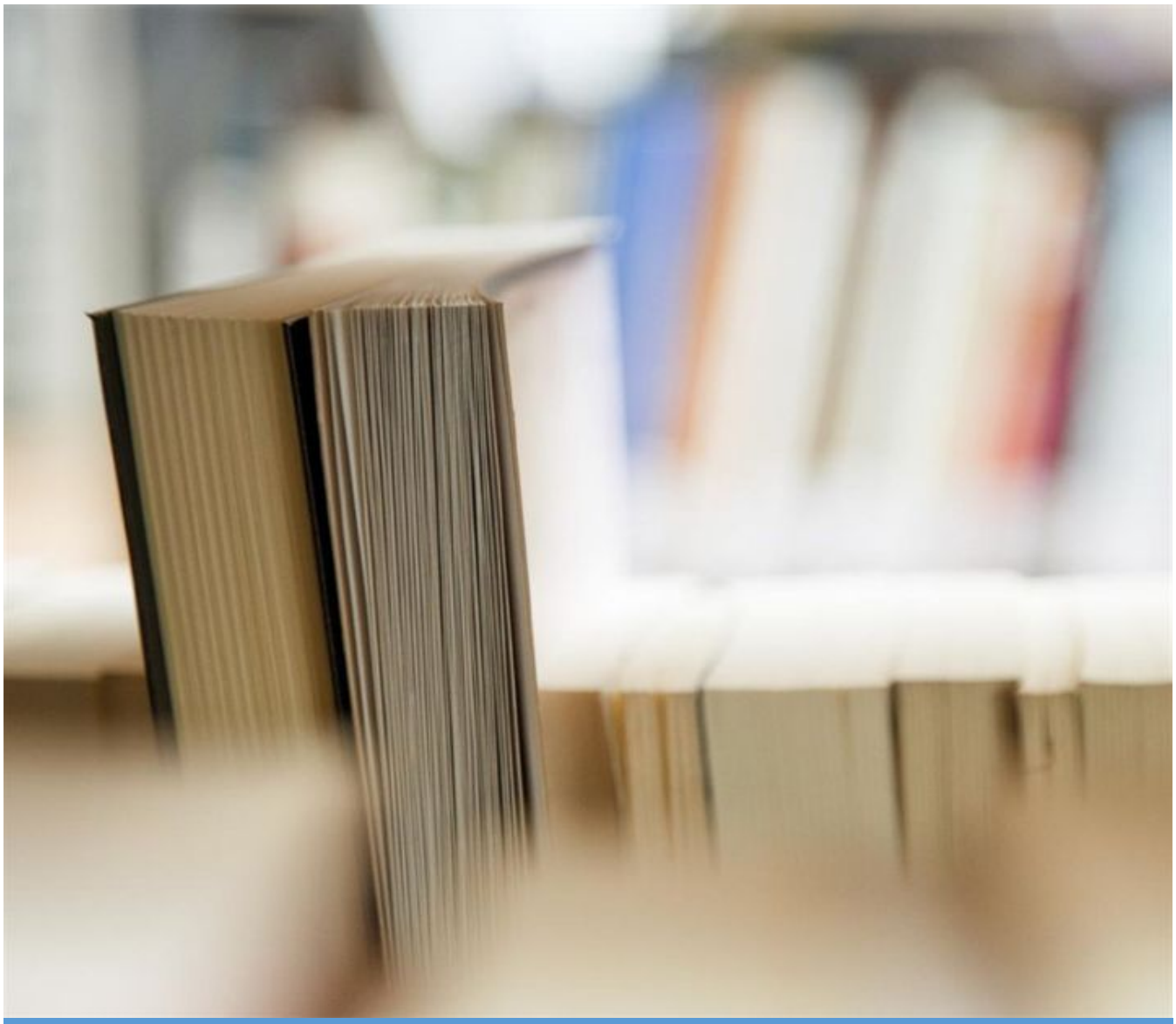
5. BACKGROUND:

Attached is the Fall, 2017 Special Report regarding enrollments in UMS Early College Programs. Since 2009, enrollments and credit hour production in Early College programs have continued to grow (+20.7%) through 2016/2017. For the 2016-2017 academic year, Early College enrollments produced 17,084 credit hours, with UMFK and UMPI accounting for 51% of the total credit hour production in Early College.

With respect to matriculation of high school students participating in Early College programming to postsecondary education, the rates are below our aspirations. First, on the basis of Fall, 2016 data, students are more likely to enroll at any university within the UMS than simply the institution from which they received Early College program. Second, overall matriculation rates to any USM institution average 28.4% across the System, with the highest rates to UMM (46.2%), UMF (37.5%) and UMPI (34.2%). In addition, another 5.9% of students participating in UMS Early College programs enroll in post-secondary education at a non-UMS institution. The UMS is seeking to incentivize matriculation to its campuses with $140 thousand dedicated to Early College scholarships in Fall, 2018.

UMS campus proposals to support growth and/or enhanced quality standards in Early College were received on January 29, 2018 and have been reviewed by UMS staff. The VCAA will present information regarding these proposals, as well as the status of the UMS Lead Coordinator position for Early College.

2/23/18



High School Student Enrollment in UMS Early College Programs

2017 Special Report

1/29/18 UMS Office of Institutional Research

High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

Introduction

The following report provides an analysis of high school student enrollment in early college programs. Early college programs may include students taking courses directly through the university, through a high school teacher certified to teach for college credit, or through one of several existing programs in the University of Maine System.

Data Sources: UMS PeopleSoft Database and National Student Clearinghouse

Contents

High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

Summary

- Fall enrollments in early college programs are growing by all measures. The UMS experienced a 16 percent average Fall semester headcount increase and a 20.7 percent credit hour increase since Fall 2009, and credit hours up 20.7 percent. Growth is largest at UMFK and UMPI, where Early College programs also make up a larger share of all credit hours. Spring semester enrollments are also increasing across the system (an average of 14.4 percent since 2009), though not all Early College programs enroll students during the spring term. Spring headcount and credit hour increases over this time are also largest at UMFK and UMPI.

- Combining Fall and Spring semesters provides a picture of what annual enrollments look like in early college programs. The UMS headcount is up 15.3 percent on average since 2009, from 2009-10 to 2015-16. Credit hour enrollments are up 21.2 percent over the same period.

- Growth between Fall 2016 and Fall 2017 (two years for which the most comparable Early College data are available) varies by program and institution. For example, the Aspirations program at UMPI saw the largest increases between these two semesters, whereas there was a drop in enrollment in this program as well as in credit hours at UMFK. Aspirations is up substantially at UMA whereas Bridge Year declined. These examples illustrate the uneven fluctuation of enrollments and credit hours across the different Early College programs.

- Comparing Fall 2016 data of students enrolled in Early College to those who went on to enroll in Fall 2017, students were more likely to go on to enroll anywhere within the system than simply the institution where they completed their Early College work, with 28.4 percent of Fall 2016 Early College students enrolling in a UMS institution in the Fall 2017. More than a third of Fall 2016 Early College students went on to attend an institution outside the UMS in Fall 2017 according to Clearinghouse data. Among those who enrolled externally in Fall 2017, the majority of these students enrolled at four-year institutions—particularly Husson University or the University of New England.

- Fall-to-fall retention rates are higher among Early College students (with the exception of Bridge Year) within the UMS compared to students who were not enrolled in these Early College programs. At the system level, students who participated in Academ-e and Aspirations (the only two programs for which six-year graduation rates can be calculated) were also more likely than the overall student population to graduate with a bachelor's degree within six years.

- The types of courses that Early College students participated in during the Fall 2017 semester varied by program and institution, but these courses represent those for which Early College students will receive credit for should they go on to enroll in the UMS. Because Early College students pay a lower rate than other students enrolled in the UMS, this represents revenue that will need to be generated elsewhere. But at the same time, the variety of coursework that Early College students undertake represents not only general education requirements, but the varied academic interests of these students.

Notes

1. Students who matriculate as a degree-seeking student at a UMS Campus may not matriculate or complete a degree at the campus in which they originally enrolled as a high school student.
2. FTE is calculated by dividing credit hours by 15 for undergraduate students, or dividing credit hours by 16 at UMF.
3. Percentages are rounded and therefore might not sum to 100 percent.
4. Matriculated students are degree-seeking students enrolled in a major.
5. Retention and Graduation rates for the UMS are unofficial and are derived from the MaineStreet PeopleSoft database. IPEDS does not compile system-level data.

Definitions

Academ-e: The first early college distance education program in Maine, the University of Maine Academ-e offers courses for university credit to Maine high school juniors and seniors through internet-based "online" technologies.

Bridge Year: Provides an optional path for high school students that allows for the completion of an Associate's degree in half the time for a fraction of the cost. Immediately following high school graduation, these students will have enough credits to complete an Associate degree within 12-months. Bridge Year students typically take two semesters of college credit in the fall semesters. Bridge year is a relatively new program, starting in Fall 2013 at UMaine, Fall 2014 at UMA, and Fall 2016 at USM.

Aspirations: The high school aspirations program raises educational aspirations of Maine high school juniors and seniors by offering an opportunity to experience college by registering for college courses at a reduced tuition rate.

Dual Enrollment: Dual enrollment provides high school students the opportunity to take college-credit bearing courses taught by college-approved high school teachers. Students gain exposure to the academic challenges of college while in their supportive high school environment, earning transcripted college credit at the time they successfully pass the course. Dual enrollment partnerships differ from other models of early study/aspirations enrollment because high school instructors teach the college courses.

High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

Historical Fall High School Enrollments in Early College Programs

Fall Headcount Enrollments in Early College Programs by Campus

	2009	2010	2011	2012	2013	2014	2015	2016	2017	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	142	145	149	139	182	263	235	230	144	0	2.9%	
UMA	85	53	63	91	108	235	373	394	397	39	28.4%	
UMF	-	-	-	-	-	8	12	9	47	N/A	N/A	
UMFK	29	31	58	112	125	265	479	755	656	78	54.5%	
UMM	42	30	29	44	84	81	91	70	69	3	11.9%	
UMPI	43	28	56	70	91	86	256	388	459	52	47.8%	
USM	412	420	359	464	562	468	552	539	500	11	3.7%	
Total	**753**	**707**	**714**	**920**	**1,152**	**1,406**	**1,998**	**2,385**	**2,272**	**190**	**16.0%**	

Fall Credit Hour Enrollments in Early College Programs by Campus

	2009	2010	2011	2012	2013	2014	2015	2016	2017	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	467	472	497	491	592	1,448	890	760	506	6	10.5%	
UMA	303	186	211	300	404	959	2,707	2,889	2,387	261	45.1%	
UMF	-	-	-	-	-	29	56	34	196	N/A	N/A	
UMFK	87	102	256	576	562	1,110	2,031	3,099	2,652	321	63.7%	
UMM	148	101	108	147	280	294	301	266	269	15	12.3%	
UMPI	135	92	173	216	294	317	1,191	2,789	2,742	326	66.6%	
USM	1,620	1,745	1,488	1,888	2,282	1,921	2,349	2,453	2,167	68	5.0%	
Total	**2,760**	**2,698**	**2,733**	**3,618**	**4,414**	**6,078**	**9,525**	**12,290**	**10,919**	**1,020**	**20.7%**	

Fall FTE Enrollments in Early College Programs by Campus

	2009	2010	2011	2012	2013	2014	2015	2016	2017	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	31.1	31.5	33.1	32.7	39.5	96.5	59.3	50.7	33.7	0	10.5%	
UMA	20.2	12.4	14.1	20.0	26.9	63.9	180.5	192.6	159.1	17	45.1%	
UMF	-	-	-	-	-	1.8	3.5	2.1	12.3	N/A	N/A	
UMFK	5.8	6.8	17.1	38.4	37.5	74.0	135.4	206.6	176.8	21	63.7%	
UMM	9.9	6.7	7.2	9.8	18.7	19.6	20.1	17.7	17.9	1	12.3%	
UMPI	9.0	6.1	11.5	14.4	19.6	21.1	79.4	185.9	182.8	22	66.6%	
USM	108.0	116.3	99.2	125.9	152.1	128.1	156.6	163.5	144.5	5	5.0%	
Total	**184.0**	**179.9**	**182.2**	**241.2**	**294.2**	**405.0**	**634.7**	**819.3**	**727.1**	**68**	**20.7%**	

Note: Historic data on Early College are not disaggregated by program, as methods for identifying such enrollments were not consistent until Fall 2016).

Historical Spring High School Enrollments in Early College Programs

Spring Headcount Enrollments in Early College Programs by Campus

	2010	2011	2012	2013	2014	2015	2016	2017	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	135	121	103	105	97	146	140	118	-2	-0.03%	
UMA	71	49	68	99	85	88	90	153	12	16.4%	
UMF	-	-	-	-	6	3	9	2	N/A	N/A	
UMFK	39	46	80	74	96	197	367	444	58	46.7%	
UMM	47	26	37	31	53	53	59	80	2	14.2%	
UMPI	15	30	41	39	70	49	182	257	35	70.6%	
USM	219	150	165	185	166	178	191	171	-7	-2.2%	
Total	**526**	**422**	**494**	**533**	**573**	**714**	**1,038**	**1,225**	**85**	**14.4%**	

Spring Credit Hour Enrollments in Early College Programs by Campus

	2010	2011	2012	2013	2014	2015	2016	2017	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	449	380	336	336	310	487	481	396	-8	0.50%	
UMA	236	167	233	335	308	336	361	569	48	17.2%	
UMF	-	-	-	-	30	12	49	8	N/A	N/A	
UMFK	132	169	310	341	376	761	1,490	1,655	218	48.7%	
UMM	164	99	123	100	184	190	200	298	6	15.3%	
UMPI	49	88	132	123	246	177	680	1,171	160	78.7%	
USM	857	620	647	720	650	716	759	698	-23	-1.9%	
Total	**1,887**	**1,523**	**1,781**	**1,955**	**2,104**	**2,679**	**4,020**	**4,795**	**355**	**16.0%**	

Spring FTE Enrollments in Early College Programs by Campus

	2010	2011	2012	2013	2014	2015	2016	2017	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	29.9	25.3	22.4	22.4	20.7	32.5	32.1	26.4	-1	0.50%	
UMA	15.7	11.1	15.5	22.3	20.5	22.4	24.1	37.9	3	17.1%	
UMF	-	-	-	-	1.9	0.8	3.1	0.5	N/A	N/A	
UMFK	8.8	11.3	20.7	22.7	25.1	50.7	99.3	110.3	15	48.7%	
UMM	10.9	6.6	8.2	6.7	12.3	12.7	13.3	19.9	0	15.4%	
UMPI	3.3	5.9	8.8	8.2	16.4	11.8	45.3	78.1	11	78.7%	
USM	57.1	41.3	43.1	48.0	43.3	47.7	50.6	46.5	-2	-2.0%	
Total	**125.8**	**101.5**	**118.7**	**130.3**	**140.1**	**178.6**	**267.8**	**320**	**24**	**16.0%**	

Note: Historic data on Early College are not disaggregated by program, as methods for identifying such enrollments were not consistent until Fall 2016).

High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

Fall/Spring Annual High School Enrollments in Early College Programs

Headcount Enrollments in Early College Programs by Fall/Spring Year by Campus

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	233	221	211	194	219	358	309	296	11	7.5%	
UMA	126	86	105	142	139	271	413	478	59	28.5%	
UMF	-	-	-	-	6	9	17	9	N/A	N/A	
UMFK	56	69	106	122	147	311	620	892	139	53.9%	
UMM	61	39	48	52	95	91	102	106	8	14.3%	
UMPI	53	46	72	88	127	101	298	431	63	47.4%	
USM	578	524	490	607	686	614	696	674	16	4.0%	
Totals	**1,107**	**985**	**1,032**	**1,205**	**1,419**	**1,755**	**2,455**	**2,886**	**297**	**15.3%**	

Credit Hour Enrollments in Early College Programs by Fall/Spring Year by Campus

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	916	852	833	827	902	1,935	1,371	1,156	40	14.1%	
UMA	539	353	444	635	712	1,295	3,068	3,458	487	44.2%	
UMF	-	-	-	-	30	41	105	42	N/A	N/A	
UMFK	219	271	566	917	938	1,871	3,521	4,754	756	64.1%	
UMM	312	200	231	247	464	484	501	564	42	13.7%	
UMPI	184	180	305	339	540	494	1,871	3,960	629	68.0%	
USM	2,477	2,365	2,135	2,608	2,932	2,637	3,107	3,150	112	4.7%	
Totals	**4,647**	**4,221**	**4,514**	**5,573**	**6,518**	**8,757**	**13,544**	**17,084**	**2,073**	**21.2%**	

FTE Enrollments in Early College Programs by Fall/Spring Year by Campus

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Avg. # Chg.	Avg. % Chg.	Spark Line
UM	61.1	56.8	55.5	55.1	60.1	129.0	91.4	77.1	3	14.1%	
UMA	35.9	23.5	29.6	42.3	47.5	86.3	204.5	230.5	32	44.2%	
UMF	-	-	-	-	1.9	2.6	6.6	2.6	N/A	N/A	
UMFK	14.6	18.1	37.7	61.1	62.5	124.7	234.7	316.9	50	64.1%	
UMM	20.8	13.3	15.4	16.5	30.9	32.2	33.4	37.6	3	13.7%	
UMPI	12.3	12.0	20.3	22.6	36.0	32.9	124.7	264.0	42	68.0%	
USM	165.1	157.6	142.3	173.9	195.4	175.8	207.1	210.0	7	4.7%	
Totals	**309.8**	**281.4**	**300.9**	**371.5**	**434.4**	**583.6**	**902.5**	**1,138.7**	**138**	**21.2%**	

Note: Historic data on Early College are not disaggregated by program, as methods for identifying such enrollments were not consistent until Fall 2016).

High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

High School Student Headcount Enrollments in Early College Programs

Headcount enrollments for early college high school students below are by category. Bridge year students only enroll in the Fall semester. A separate category shows students taking courses directly through the university as aspirations and through their local high school as dual enrollment concurrently.

Early College Program		Fall 2016	Spring 2017	Fall 2017
UM	Academ-e	121	99	125
	Aspirations	19	19	13
	Bridge Year	90	-	6
	Early College Total	**230**	**118**	**144**
UMA	Aspirations	127	138	222
	Bridge Year	250	15	166
	Dual Enrollment	17	-	9
	Early College Total	**394**	**153**	**397**
UMF	Aspirations	9	2	47
	Early College Total	**9**	**2**	**47**
UMFK	Aspirations	337	189	214
	Dual Enrollment	418	255	442
	Early College Total	**755**	**444**	**656**
UMM	Aspirations	70	80	69
	Early College Total	**70**	**80**	**69**
UMPI	Aspirations	54	48	44
	Dual Enrollment	334	203	415
	Aspirations & Dual Enrollment*	-	6	-
	Early College Total	**388**	**257**	**459**
USM	Aspirations	140	113	126
	Bridge Year	16	-	10
	Dual Enrollment	399	58	364
	Early College Total	**555**	**171**	**500**
UMS Early College Total		**2,401**	**1,225**	**2,272**

Notes:

- With the exception of UMFK, all figures are derived from either Academic Plans or (in the case of UMPI) sub-plans. For UMFK, course-level data were used to separated Dual Enrollment and Aspirations students.
- Bridge year students only enroll in the Fall semester.
- Data that are disaggregated by type of program are shown going back only to Fall 2016, as consistent methods for identifying students by type of program were not available until Fall 2016 (when all institutions began either using an Academic Plan, Sub-Plan, or Course Attribute to specify type of program).

High School Student Credit Hours Enrollments in Early College Programs

Early College Program		Fall 2016	Spring 2017	Fall 2017
UM	Academ-e	397	333	430
	Aspirations	68	63	52
	Bridge Year	295	-	24
	Early College Total	**760**	**396**	**506**
UMA	Aspirations	471	524	819
	Bridge Year	2,350	45	1523
	Dual Enrollment	68	-	45
	Early College Total	**2,889**	**569**	**2,387**
UMF	Aspirations	34	8	196
	Early College Total	**34**	**8**	**196**
UMFK	Aspirations	1,473	753	968
	Dual Enrollment	1,626	902	1,690
	Early College Total	**3,099**	**1,655**	**2,658**
UMM	Aspirations	266	298	269
	Early College Total	**266**	**298**	**269**
UMPI	Aspirations	236	181	161
	Dual Enrollment	2,533	968	2,581
	Aspirations & Dual Enrollment*	-	22	
	Early College Total	**2,789**	**1,171**	**2,742**
USM	Aspirations	589	464	544
	Bridge Year	208	-	94
	Dual Enrollment	1,656	234	1,530
	Early College Total	**2,245**	**698**	**2,167**
UMS Early College Total		**12,082**	**4,795**	**10,925**

Notes:

- With the exception of UMFK, all figures are derived from either Academic Plans or (in the case of UMPI) sub-plans. For UMFK, course-level data were used to separated Dual Enrollment and Aspirations students.
- Bridge year students only enroll in the Fall semester.
- Data that are disaggregated by type of program are shown going back only to Fall 2016, as consistent methods for identifying students by type of program were not available until Fall 2016 (when all institutions began either using an Academic Plan, Sub-Plan, or Course Attribute to specify type of program).

High School Student FTE in Early College Programs

Early College Program		Fall 2016	Spring 2017	Fall 2017
UM	Academ-e	26.5	22.2	28.7
	Aspirations	4.5	4.2	3.5
	Bridge Year	19.7	-	1.6
	Early College Total	**50.7**	**26.4**	**33.7**
UMA	Aspirations	31.4	34.9	54.6
	Bridge Year	156.7	3.0	101.5
	Dual Enrollment	4.5	-	3.0
	Early College Total	**192.6**	**37.9**	**159.1**
UMF	Aspirations	2.1	0.5	12.3
	Early College Total	**2.1**	**0.5**	**12.3**
UMFK	Aspirations	98.2	50.2	64.5
	Dual Enrollment	108.4	60.1	112.7
	Early College Total	**206.6**	**110.3**	**177.2**
UMM	Aspirations	17.7	19.9	17.9
	Early College Total	**17.7**	**19.9**	**17.9**
UMPI	Aspirations	15.7	12.1	10.7
	Dual Enrollment	168.9	64.5	172.1
	Early College Total	**185.9**	**78.1**	**182.8**
USM	Aspirations	39.3	30.9	36.3
	Bridge Year	13.9	-	6.3
	Dual Enrollment	110.4	15.6	102.0
	Early College Total	**149.7**	**46.5**	**144.5**
UMS Early College Total		**805**	**320**	**728**

Notes:

- With the exception of UMFK, all figures are derived from either Academic Plans or (in the case of UMPI) sub-plans. For UMFK, course-level data were used to separated Dual Enrollment and Aspirations students.
- Bridge year students only enroll in the Fall semester.
- Data that are disaggregated by type of program are shown going back only to Fall 2016, as consistent methods for identifying students by type of program were not available until Fall 2016 (when all institutions began either using an Academic Plan, Sub-Plan, or Course Attribute to specify type of program).

High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

Early College Participation and Subsequent Enrollment in UMS

Whether or not Early College students eventually go on to enroll at a UMS institution or enroll elsewhere varies widely across the system. Analyzing students enrolled in Early College in the Fall 2016 and comparing them to Fall 2017 enrollments, anywhere from 6.1 percent (UMA) to 23.1 percent (UMM) went on to enroll at the same institution where they completed some or all of their Early College work (10.8 percent system-wide).

Note that a large share of Fall 2016 Early College students could not be tracked via Clearinghouse data ("Unknown Status in Fall 2017"). These students may still be in high school (but not participating in UMS Early College programs), enrolled outside the UMS, have completed high school but not enrolled in a postsecondary institution, or could not be matched within the National Student Clearinghouse database.[1]

	Fall 2016 Cohort	Still in Early College in Fall 2017	Adjusted Cohort*	Enrolled at Same UMS Institution in Fall 2017		Enrolled at Any UMS Institution in Fall 2017		Enrolled at External Institution in Fall 2017		Unknown Status in Fall 2017	
	#	#	#	#	%	#	%	#	%	#	%
UM	230	53	177	35	19.8%	60	33.9%	45	25.4%	73	41.2%
UMA	394	133	261	16	6.1%	70	26.8%	70	26.8%	121	46.4%
UMF	9	1	8	1	12.5%	3	37.5%	4	50.0%	1	12.5%
UMFK	755	132	623	29	4.7%	181	29.1%	157	25.2%	286	45.9%
UMM	70	18	52	12	23.1%	24	46.2%	19	36.5%	9	17.3%
UMPI	388	189	199	26	13.1%	68	34.2%	67	33.7%	66	33.2%
USM	555	43	512	64	12.5%	132	25.8%	250	48.8%	130	25.4%
UMS Unduplicated Total **	***2,211***	***509***	***1,702***	***183***	***10.8%***	***483***	***28.4%***	***584***	***34.3%***	***637***	***37.4%***

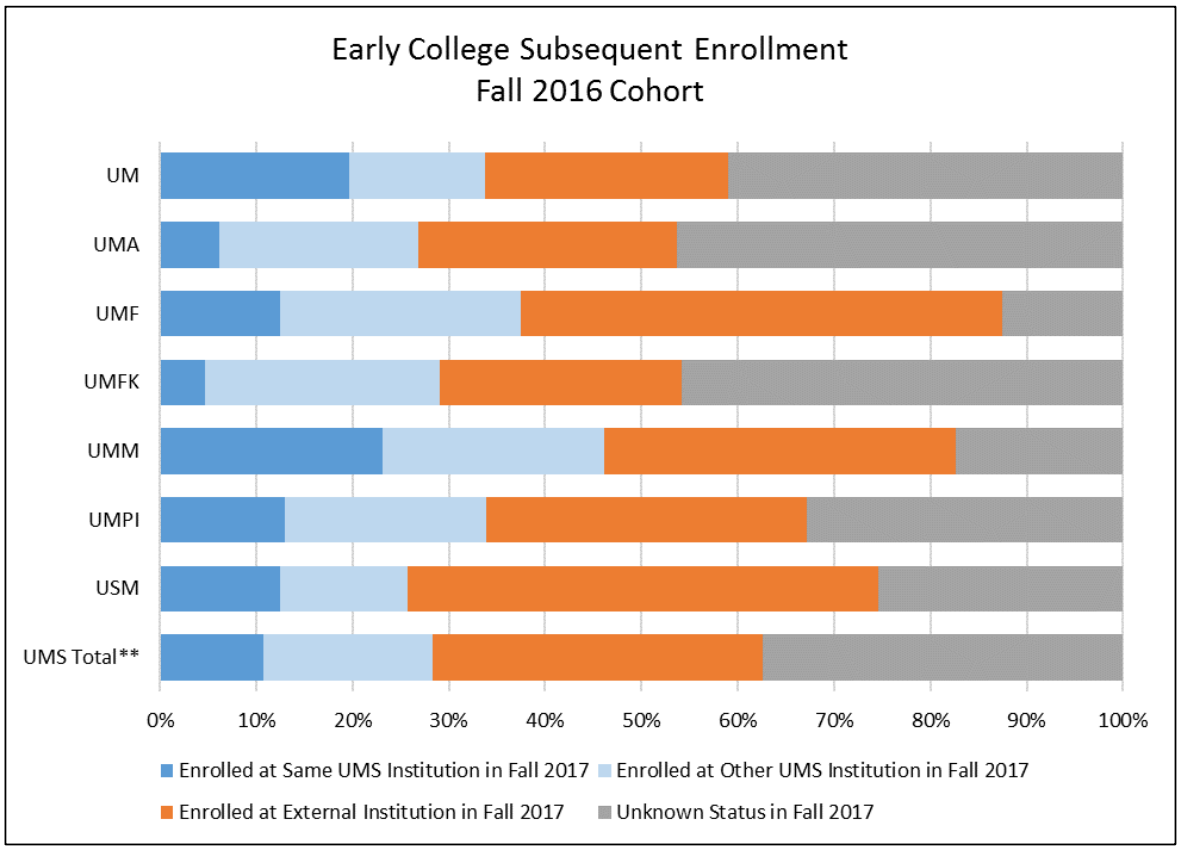
* The adjusted cohort includes the Fall 2016 cohort less those still in Early College in Fall 2017

** The Unduplicated Total counts students only once (e.g., a student enrolled simultaneously in Early College programs at both UM and UMA would only be counted once here, whereas they are counted for both UM and UMA in the above rows). Students enrolled across multiple UMS institutions are counted once under "Enrolled at Same UMS Institution in Fall 2017" if they enrolled at one of the institutions they attended as an Early College student (e.g., if a student enrolled in Early College programs at UM and UMA in Fall 2016 and then enrolled at UM the following Fall semester, they are counted once under "Enrolled at Same UMS Institution.").

[1] Students have the option to place privacy holds on their data within the National Student Clearinghouse, which can prevent access to matching subsequent enrollment records. Name changes or other variations also prevent us from matching UMS data to that provided by the Clearinghouse.

High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

The figure below illustrates enrollments of the Fall 2016 Early College cohort in the Fall 2017 semester. As the UMS (unduplicated) total suggests, just under 30 percent of students who were enrolled in Early College programs in the Fall 2016 subsequently enrolled in the same or a different UMS institution in Fall 2017. Historically, about a third enrolled outside the UMS, and this trend remained for the Fall 2016, with 34 percent of the 2016 Early College cohort enrolling at an external institution in the Fall 2017. Well over a third of this cohort (37 percent) could not be identified with respect to subsequent enrollment in Fall 2017.



Subsequent Enrollment External to the UMS

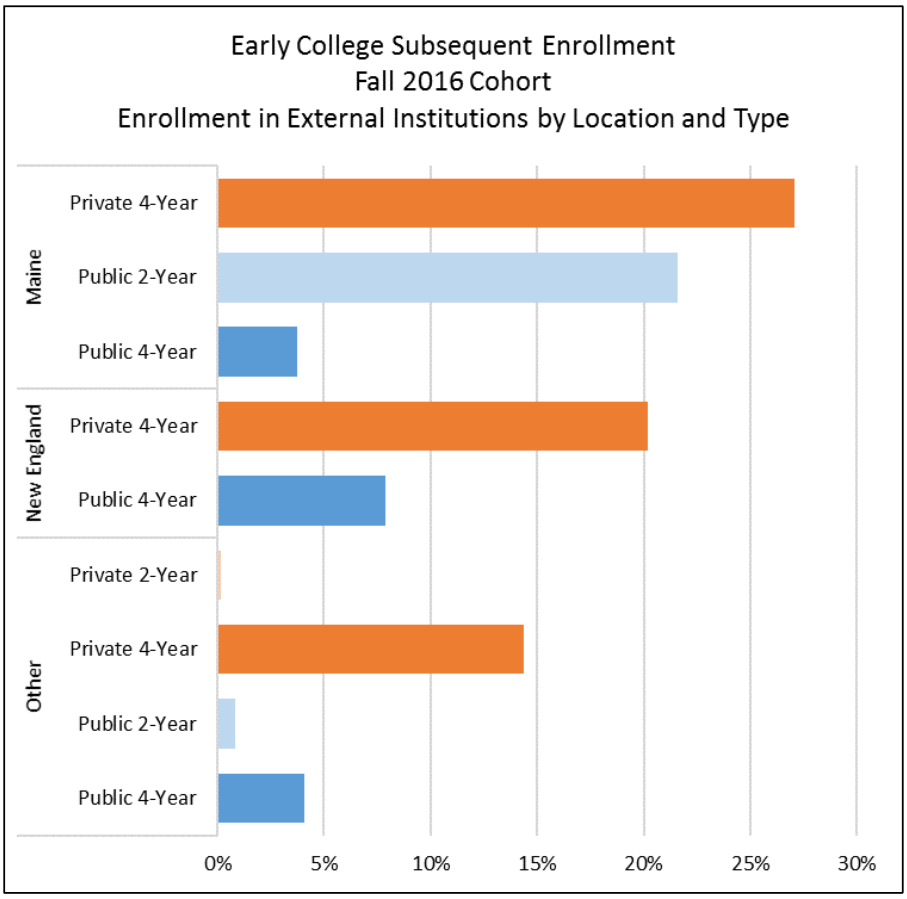
Among the Fall 2016 Early College cohort who enrolled outside the UMS, the majority enrolled in Private, 4-Year institutions, predominantly either in Maine or New England. Across the board, 61.6 percent of the Fall 2016 Early College cohort who enrolled elsewhere in Fall 2017 went on to enroll in a private 4-year institution. Most commonly, these private 4-year institutions consisted of Husson University and the University of New England. Among public 4-year institutions, members of the Fall 2016 cohort who did not enroll in the UMS most commonly enrolled at either the University of New Hampshire or the University of Vermont. Finally, the 2-year institution this cohort most commonly enrolled in was Southern Maine Community College, followed by Northern Maine Community College.

Early College Subsequent Enrollment
Fall 2016 Cohort
Enrollment in External Institutions by Location and Type

Location	Type	#	%
Maine	**Private 4-Year**	158	27.1%
	Public 2-Year	126	21.6%
	Public 4-Year	22	3.8%
	Subtotal	306	52.4%
New England	**Private 4-Year**	118	20.2%
	Public 4-Year	46	7.9%
	Subtotal	164	28.1%
Other	**Private 2-Year**	1	0.2%
	Private 4-Year	84	14.4%
	Public 2-Year	5	0.9%
	Public 4-Year	24	4.1%
	Subtotal	114	19.5%
Total	**Private 2-Year**	1	0.2%
	Private 4-Year	360	61.6%
	Public 2-Year	131	22.4%
	Public 4-Year	92	15.8%
	Total	***584***	***100.0%***

High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

Top External Institutions Where UMS Early College Students Enrolled		
Institution	**#**	**%**
Husson University	56	9.6%
Southern Maine Community College	38	6.5%
University Of New England	32	5.5%
Northern Maine Community College	28	4.8%
Eastern Maine Community College	24	4.1%
Saint Joseph's College Of Maine	22	3.8%
Central Maine Community College	22	3.8%
Maine Maritime Academy	22	3.8%
Thomas College	19	3.3%
Colby College	10	1.7%
University Of Vermont & State Agricultural College	10	1.7%
University Of New Hampshire- Durham	10	1.7%



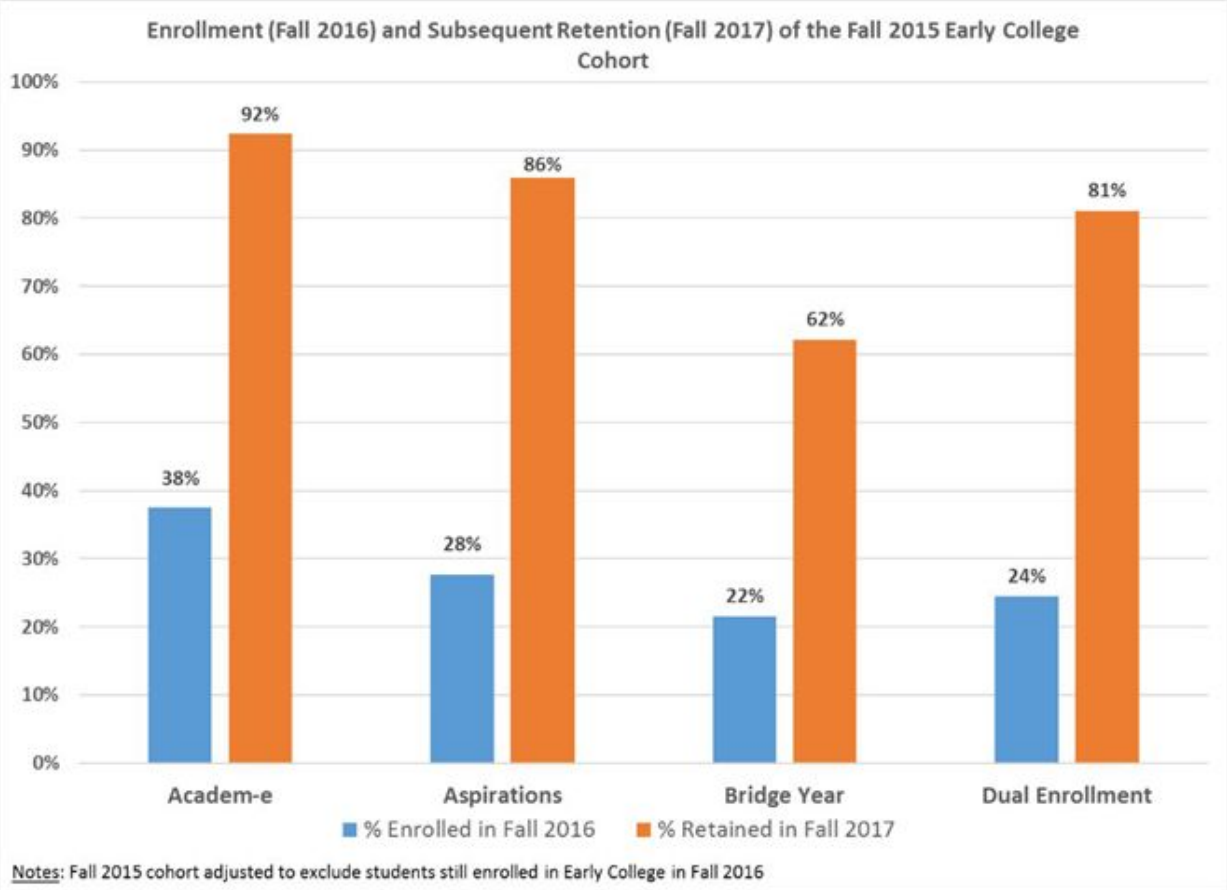
High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

Fall-to-Fall Retention of the Fall 2015 Early College Cohort by Program

Fall-to-fall retention rates tend to be higher among students previously enrolled in Academ-e, Aspirations, and Dual Enrollment compared to the overall student population. Overall, 74% of the entering Fall 2016 UMS cohort returned in Fall 2017. By comparison, the retention rate over the same period was 92% for Academ-e students, 86% for Aspirations students, and 81% among Dual Enrollment students. Only Bridge Year students had a lower retention rate (62%) than the UMS overall rate.

Retention Rates by Program for Fall 2015 UMS Early College Cohorts

	Early College in Fall 2015	Still EC Fall 2016	Adjusted Cohort	Enrolled in Fall 2016	Retained in Fall 2017	% Enrolled in Fall 2016	% Retained in Fall 2017
Academ-e	118	14	104	39	36	38%	92%
Aspirations	534	96	438	121	104	28%	86%
Bridge Year	315	143	172	37	23	22%	62%
Dual Enrollment	1010	169	841	206	167	24%	81%
UMS Overall	-	-	-	***4,013***	***2,969***	-	***74%***

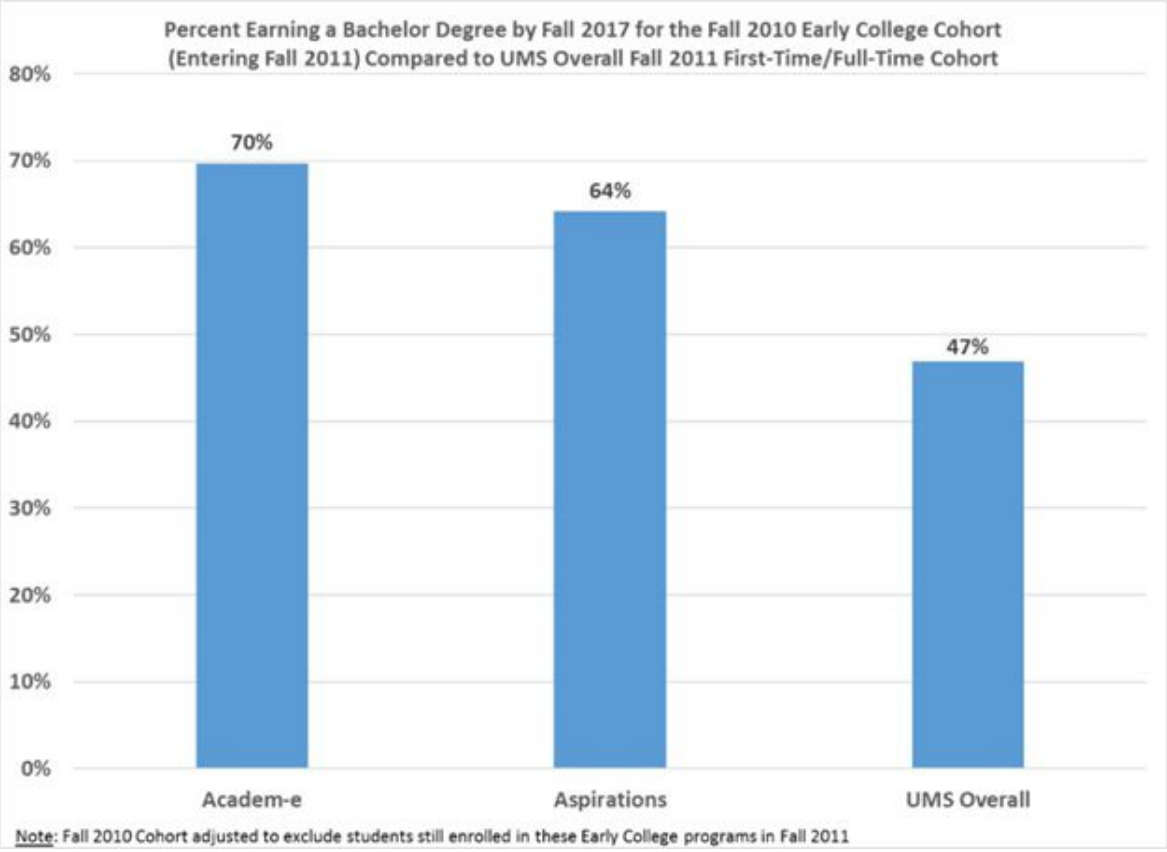


Six-Year Graduation Rates among the Fall 2010 Aspirations and Academ-e Cohorts

Academ-e and Aspirations students enrolled in these Early College programs in the Fall 2010 who then enrolled as full-time students in the Fall 2011 have higher six-year graduation rates compared to the overall Fall 2011 entering cohort as a whole. Specifically, 47% of the entering first-time/full-time cohort across the UMS earned a bachelor degree six years later. By comparison, 70% of Academ-e students earned a bachelor degree within this same time frame, as did 62% of Aspirations students. Data on six-year graduation rates are not yet available for other Early College programs.

Six-Year Graduation Rates for Fall 2010 Early College Cohorts by Program

	Early College Fall 2010	Enrolled Fall 2011 (not Early College)	Graduated with Bachelors by Fall 2017	% Graduated with Bachelors by Fall 2017
Academ-e	121	33	23	70%
Aspirations	223	53	34	64%
UMS Overall	**-**	***3,743***	***1,756***	***47%***



High School Student Enrollment in UMS Early College Programs – Fall 2017 Special Report

Early College Course Enrollments by Institution & Program (Fall 2017)

The five courses with the highest early college enrollments by institution and program appear below. These lists represent the types of courses for which Early College students who go on to enroll in the UMS would go on to receive transcripted credit.

Academ-E				
UM	PSY	100	General Psychology	26
	GOV	200	American Government	15
	MUS	122	Fundamentals of Music	12
	AST	109	Introduction to Astronomy	11
	LAT	101	Elementary Latin I	11

Dual Enrollment				
UMA	FRE	102	Elementary French II	4
	FRE	203	Intermediate French I	2
	CHY	100	Fundamentals of Chemistry	1
	ENG	101	College Writing	1
	FRE	101	Elementary French I	1
UMFK	ENG	100	English Composition I	150
	HTY	103	United States History I	119
	GOV	200	American Government	49
	MAT	112	College Algebra	37
	CHY	100	Chemistry I	32
USM	MAT	113	Intro to Statistics	213
	MAT	152	Calculus A	153
	MAT	153	Calculus B	8
	MAT	252	Calculus C	7
	COS	160	Structured ProblemSolving:Java	1
UMPI	ENG	101	College Composition	123
	MAT	112	College Algebra	106
	HTY	103	United States History I	103
	CHY	111	General Chemistry I	58
	MAT	165	Pre-Calculus	58

Bridge Year				
UM	PHY	105	Descriptive Physics	6
UMA	ENG	102W	Intro to Literature	89
	ENG	101	College Writing	76
	CHY	100	Fundamentals of Chemistry	57
	HTY	104	U.S. History II	55
	MAT	111	Algebra II	51
	MAT	115	Elementary Statistics I	51
USM	HTY	102	Western Civilization II	10
	LAC	210	Creative Critical Inquiry	10
	MAT	113	Intro to Statistics	6

Aspirations				
UM	ENG	101	College Composition	3
	PSY	100	General Psychology	3
	MAT	127	Calculus II	2
	THE	117	Fundamentals of Acting	2
	BIO	100	Basic Biology	1
UMF	HTY	103	United States History I	15
	EDU	125	Intro Theory/Pract K-8 Educ	11
	EDU	177	Topics in Education	11
	PHY	110N	Elementary Physics	11
	ENG	100	Writing Seminar	3
UMFK	ENG	100	English Composition I	65
	MAT	112	College Algebra	44
	PSY	100	Introduction to Psychology	37
	BIO	220	Anatomy & Physiology I	18
	MAT	351	Statistics I	18
UMM	ENG	101	Composition	19
	PSY	100	Intro to Psychology	16
	ANT	101	Cultural Anthropology	6
	ASL	101	Introduction to Sign Language	6
	MAR	101	Marketing & Entrepreneurship	4
USM	ENG	101	College Writing	34
	MAT	113	Intro to Statistics	22
	MAT	152	Calculus A	7
	ECO	101	Introduction to Macroeconomics	5
	MAT	295	Linear Algebra	5
UMPI	PSY	100	General Psychology	13
	MAT	101	Basic Statistics	11
	ENG	101	College Composition	10
	MAT	112	College Algebra	6
	HTY	115	World Civilization I	3
	SOC	101	Introduction to Sociology	3

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

1. NAME OF ITEM: Faculty Representatives: Discussion

2. INITIATED BY: Gregory G. Johnson, Chair

3. BOARD INFORMATION: X **BOARD ACTION:**

4. OUTCOME: **BOARD POLICY:**

5. BACKGROUND:

The Faculty Representatives to the Board of Trustees have determined an agenda of topical areas they would like to address with the Board Academic and Student Affairs Committee. Among the topics to be discussed is further feedback on the draft Board Policy 214 "Institutional Authority on Political Matters". Elizabeth Turesky, USM faculty representative, will lead the discussion.

2/23/18

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

AGENDA ITEM SUMMARY

1. NAME OF ITEM: Student Representatives: Discussion

2. INITIATED BY: Gregory G. Johnson, Chair

3. BOARD INFORMATION: X **BOARD ACTION:**

4. OUTCOME: **BOARD POLICY:**

5. BACKGROUND:

The Student Representatives to the Board of Trustees have determined an agenda of topical areas they would like to address with the Board Academic and Student Affairs Committee. They will discuss these with the Committee.

2/23/18