



AUBURN UNIVERSITY
OFFICE OF THE PRESIDENT

September 5, 2017

MEMORANDUM TO: Board of Trustees

SUBJECT: September 14-15, 2017 Board of Trustees Workshop and Meeting

Enclosed are materials that comprise the proposed agenda for the Thursday, September 14 workshop and the Friday, September 15, 2017 meeting of the Board of Trustees. Listed below is the tentative schedule; times and locations that are subject to adjustment, depending on length of individual meetings.

Thursday, September 14, 2017

1:00 p.m. Workshop (**President's Office Board Room, 107 Samford Hall**)

Friday, September 15, 2017 (Student Center Ballroom, 255 Heisman Drive)

8:30 a.m. Property and Facilities Committee

9:00 a.m. Academic Affairs Committee

9:15 a.m. Finance Committee

9:45 a.m. Executive Committee

9:50 a.m. Trustee Reports

10:15 a.m. Regular Meeting of the Board of Trustees (Student Center Ballroom)

(Proposed Executive Session – #3163 of the Student Center)

10:45 a.m. Reconvened Meeting of the Board of Trustees (Student Center Ballroom)

11:30 a.m. Lunch (Student Center Ballroom)

We appreciate all that you do for Auburn University and look forward to seeing you on Thursday, September 14, 2017 and Friday, September 15, 2017. Please call me if you have questions regarding the agenda. Also, please let Grant Davis, Sherri Williams or me know if you need assistance with travel and/or lodging arrangements.

Sincerely,

Steven Leath
President

GD/smw

Enclosure

c: President's Cabinet (w/encl.)
Mr. Grant Davis (w/encl.)



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We appreciate all that you do for Auburn University and look forward to seeing you on Thursday, September 14, 2017 and Friday, September 15, 2017. Please call me if you have questions regarding the agenda. Also, please let Grant Davis, Sherri Williams or me know if you need assistance with travel and/or lodging arrangements.

Sincerely,

Steven Leath
President

GD/smw

Enclosure

c: President's Cabinet (w/encl.)
Mr. Grant Davis (w/encl.)

**SCHEDULE & AGENDA
AUBURN UNIVERSITY BOARD OF TRUSTEES
STUDENT CENTER BALLROOM
255 HEISMAN DRIVE
AUBURN UNIVERSITY**

THURSDAY, SEPTEMBER 14, 2017

1:00 P.M. Workshop (President's Office Board Room, 107 Samford Hall)

FRIDAY, SEPTEMBER 15, 2017

I. Meetings (Student Center Ballroom, 255 Heisman Drive)

(Meetings will begin at 8:30 a.m. - - all other meetings are subject to change in starting time, depending upon the length of individual meetings.)

A. Property and Facilities Committee/Chairperson Roberts/8:30 a.m.

Project Approvals:

1. Miller Gorrie Center Laboratory Renovations, Approval of Project Initiation and Selection of Project Architect (Dan King/Vini Nathan)
2. Tony and Libba Rane Culinary Science Center, Approval of Project Architect and Construction Manager Selections (Dan King/June Henton/Jon Waggoner)
3. Plainsman Park Player Development Improvements, Approval of Project Initiation and Authorization to Commence the Project Architect and Construction Manager Selection Processes (Dan King/Jay Jacobs)
4. Jane B. Moore Softball Complex Player Development Improvements, Approval of Project Initiation and Authorization to Commence the Project Architect and Construction Manager Selection Processes (Dan King/Jay Jacobs)
5. Auburn Arena Locker Room Renovation, Approval of Project Initiation and Authorization to Commence the Project Architect and Construction Manager Selection Processes (Dan King/Jay Jacobs)
6. Jordan-Hare Stadium North Endzone Videoboard Improvements, Approval of Project Initiation and Project Engineer Selection (Dan King/Jay Jacobs)
7. Gavin Engineering Research Laboratory Renovation, Approval of Additional Project Scope and Budget Increase (Dan King/Chris Roberts)
8. Brown-Kopel Engineering Student Achievement Center, Approval of Project Budget Increase (Dan King/Chris Roberts)

Approval of Real Estate Transactions:

9. Farmhouse Fraternity, Approval of Lease Extension (Dan King/Mark Stirling)
10. South Auburn Fisheries Property, Approval of Disposal of Real Estate (Dan King/Mark Stirling)

Informational Reports:

11. Lowder Hall Interior Renovations, *For Information Only*

12. Status Updates: For Information Only

- a. Current Status of New Construction/Renovation/Infrastructure Projects with Budgets of \$1,000,000 and Greater
- b. Quarterly Report for Projects Costing More than \$500,000 but Less than
- c. Project Status Report

B. Joint Academic Affairs and AUM Committees/Chairpersons Newton and Sahlie/9:00 a.m.

1. Proposed Master of Science in Computer Science at Auburn University at Montgomery (Carl Stockton/Mrinal Varma) (joint Academic Affairs and AUM Committee item)
2. Proposed Bioprocess Engineering Option in the Bachelor of Biosystems Engineering, College of Agriculture (Tim Boosinger/Paul Patterson)
3. Proposed Bachelor of Arts in Law and Justice, College of Liberal Arts (Tim Boosinger/Joe Aistrup)
4. Proposed Bachelor of Science in Neuroscience, College of Liberal Arts (Tim Boosinger/Joe Aistrup)
5. Proposed Bachelor of Science in Sustainable Biomaterials and Packaging, School of Forestry and Wildlife Sciences (Tim Boosinger/Janaki Alavalapati)
6. Proposed Closure of the Computer Engineering Option within the Bachelor of Electrical Engineering and Subsequent Establishment of a Bachelor of Computer Engineering, Samuel Ginn College of Engineering (Tim Boosinger/Chris Roberts)
7. Proposed Master of Science in Cybersecurity Engineering, Samuel Ginn College of Engineering (Tim Boosinger/Chris Roberts)
8. Proposed Master of Engineering, Samuel Ginn College of Engineering (Tim Boosinger/Chris Roberts)
9. Proposed PhD in Earth Systems Science, College of Sciences and Mathematics (Tim Boosinger/Nicholas Giordano)
10. Proposed Revisions to Chapter Three of the Faculty Handbook (Tim Boosinger)
11. Establishment of Managerial Group to Enable Auburn University to Conduct Selected Classified Research Programs (Tim Boosinger/John Mason)

C. Finance Committee/Chairperson Harbert/9:30 a.m.

1. Approval of the 2017-2018 Operating Budget (Kelli Shomaker)
2. Approval of Auction Liquidity Services for Disposal of Surplus Property (Kelli Shomaker)

D. Executive Committee/Chairperson McCrary/9:45 a.m.

1. Proposed Awards and Namings (Mike DeMaioribus)

E. Trustee Reports/9:50 a.m.

1. Academic Affairs Committee/Sarah Newton, Chair
2. Agriculture and Natural Resources Committee/Jimmy Sanford, Chair
3. Audit and Compliance Committee/Bob Dumas, Chair
4. AUM Committee/Clark Sahlie, Chair
5. Executive Committee/Charles McCrary, Chair
6. Finance Committee/Raymond Harbert, Chair
7. Governmental Affairs Committee/Jimmy Rane, Chair
8. Institutional Advancement Committee (Development and AU Foundation)/Wayne Smith, Chair
9. Property and Facilities Committee/B.T. Roberts, Chair
10. Research and Technology Committee (Economic Development)/Jim Pratt, Chair
11. Student Affairs Committee/Quentin Riggins, Chair
12. Alumni/Lloyd Austin, Lead Trustee
13. Athletics/Gaines Lanier, Lead Trustee
14. Legal/Elizabeth Huntley, Lead Trustee

II. REGULAR MEETING OF THE BOARD OF TRUSTEES/10:15 A.M.
(Student Center Ballroom, 255 Heisman Drive)

(Proposed Executive Session – Room #3163 of the Student Center)

III. RECONVENED MEETING OF THE BOARD OF TRUSTEES/10:45 A.M.
(Student Center Ballroom, 255 Heisman Drive)

(Agenda items are determined primarily based upon committee actions.)

11:30 A.M. - Lunch (Student Center Ballroom)

RESOLUTION

APPROVAL OF MINUTES

WHEREAS, copies of the minutes of the Reconvened Meeting on Friday, June 9, 2017, have been distributed to all members of this Board of Trustees for review.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees that the minutes of its Friday, June 9, 2017 meeting are hereby approved as distributed.

Executive Summaries
September 15, 2017

A. Property and Facilities Committee

1. Miller Gorrie Center Laboratory Renovations: Approval of Project Initiation and Selection of the Project Architect

Project Summary: The College of Architecture, Design and Construction proposes the renovation of existing space in the first-floor of the Miller Gorrie Center to create a new virtual design and construction laboratory space, which will include a visualization laboratory and student competition rooms. This project was not previously brought to the Board of Trustees for approval because it was originally estimated to cost under \$1.0 million. However, the latest design is now estimated to cost \$1.05 million. Since Board of Trustees policy stipulates that the all new construction, renovation, and adaptation projects over \$1.0 million require Board approval, this project now requires Board of Trustees approval. Since the inception of the project, the architectural firm, Inox Design of Alpharetta, Georgia, has been working under contract to complete the design of the laboratory.

Requested Action: It is requested that the Board of Trustees adopt a resolution to approve the project initiation and authorize the firm Inox Design, of Alpharetta Georgia, as project architect for the Miller Gorrie Center Laboratory Renovations project.

Previous Approvals: None.

2. Tony and Libba Rane Culinary Science Center: Approval of Project Architect and Construction Manager Selections

Project Summary: The College of Human Sciences, as part of their program in the Department of Nutrition, Dietetics, and Hospitality Management, has proposed the construction of an academic facility related to the culinary arts and other aspects of the departmental curriculum. As such, the proposed facility is anticipated to have a strong connection to the Auburn University Hotel and Conference Center.

Requested Action: It is requested that the Board of Trustees adopt a resolution to approve the selection of the firm Cooper Carry, of Birmingham, Alabama, as the project architect and the firm Hoar Program Management, of Birmingham, Alabama, as the construction manager for the Tony and Libba Rane Culinary Science Center project.

Previous Approvals: At its previous meeting on September 16, 2016 the Board of Trustees adopted a resolution that approved the initiation of the Tony and Libba Rane Culinary Science Center project and authorized the commencement of the architect and construction manager selection processes.

3. Plainsman Park Player Development Improvements: Approval of Project Initiation and Authorization to Commence the Project Architect and Construction Manager Selection Processes

Project Summary: The Athletics Department has proposed the construction of a new player development building at Plainsman Park. This project will promote player development by providing indoor batting cages and general Gameday operations improvements in support of the Auburn Baseball program. This project will also allow currently utilized batting cage space for other player development uses.

Requested Action: It is requested that the Board of Trustees adopt a resolution to approve the initiation of the Plainsman Park Player Development Improvements project and authorize the commencement of the project architect and construction manager selection processes.

Previous Approvals: None.

4. Jane B. Moore Softball Complex Player Development Improvements: Approval of Project Initiation and Authorization to Commence the Project Architect and Construction Manager Selection Processes

Project Summary: The Athletics Department has proposed the construction of a new player development building at the Jane B. Moore Softball Complex. This project will promote player development by providing an indoor practice infield and batting cages, and will install additional seating in support of the Auburn Softball program.

Requested Action: It is requested that the Board of Trustees adopt a resolution to approve the initiation of the Jane B. Moore Softball Complex Player Development Improvements project and authorize the commencement of the project architect and construction manager selection processes.

Previous Approvals: None.

5. Auburn Arena Locker Room Renovation: Approval of Project Initiation and Authorization to Commence the Project Architect and Construction Manager Selection Processes

Project Summary: The Athletics Department has proposed the renovation of the Men's and Women's Locker Rooms at the Auburn Arena. The project will enhance the current team support spaces for Men's Basketball to include a new entry lobby, expanded locker room area, team meeting space, and team lounge. The project will also include a new Women's Basketball entry lobby, expanded team space, and improved graphics.

Requested Action: It is requested that the Board of Trustees adopt a resolution to approve the initiation of the Auburn Arena Locker Room Renovation project and authorize the commencement of the project architect and construction manager selection processes.

Previous Approvals: None.

6. **Jordan-Hare Stadium North Endzone Videoboard Improvements:
Approval of Project Initiation and Project Engineer Selection**

Project Summary: The Athletics Department has proposed the construction of a new videoboard in the North Endzone at Jordan-Hare Stadium. This project will replace the existing scoreboard in the North Endzone and will enhance the Game day experience for fans at Jordan-Hare Stadium. The target schedule for this project is to complete the installation of the videoboard prior to the start of the 2018 football season.

Requested Action: It is requested that the Board of Trustees adopt a resolution to approve the project initiation and the selection of the project engineer for the Jordan-Hare Stadium North Endzone Videoboard Improvements project.

Previous Approvals: None.

7. **Gavin Engineering Research Laboratory: Approval of Additional
Project Scope and Budget Increase**

Project Summary: This project involves the complete renovation of 59,100 square feet of space in the existing Gavin Engineering Research Laboratory, formerly known as the Textile Building. The project budget of \$16.75 million was previously approved by the Board of Trustees at its meeting on June 10, 2016. However, during the demolition the soils under portions of the existing basement and first floor were discovered to have become unsound, requiring complete removal and replacement with a new structural concrete floor system, together with repairs to a deteriorated storm sewer that was undermining part of the foundation and basement floor.

Requested Action: It is requested that the Board of Trustees adopt a resolution to approve the additional scope of work to include the repairs to the concrete slabs and storm sewer, and adopt a resolution to approve the budget increase of \$1.25 million, to be financed by University general funds, for the Gavin Engineering Research Laboratory project.

The estimated total cost of the project is \$18.0 million, to be financed by a combination of Samuel Ginn College of Engineering gift funds and University general funds.

Previous Approvals: At its meeting held on November 7, 2014, the Board of Trustees adopted a resolution that approved the initiation of the Gavin Engineering Research Laboratory Renovation, and at its meeting on February 6,

2015, the Board of Trustees approved the firm Stevens & Wilkinson, of Atlanta, Georgia, as the project architect.

At its meeting of June 10, 2016, the Board of Trustees approved the project program, site, budget, funding plan, and schematic design for the Gavin Engineering Research Laboratory.

Project Execution Schedule: Fall 2016– Spring 2018

8. Brown-Kopel Engineering Student Achievement Center: Approval of Project Budget Increase

Project Summary: This project involves the construction of a three-story, 142,000 square foot building consisting of classrooms, student study spaces, maker space, a wind-tunnel laboratory, meeting and departmental spaces for academic advising, tutoring, professional development and industrial relations. The project budget of \$39.75 million was previously approved by the Board of Trustees at its meeting on February 3, 2017. However, the project was competitively bid on May 9, 2017 and the low bid was \$3.6 million over the previously approved project budget.

Requested Action: It is requested that the Board of Trustees adopt a resolution to approve the budget increase of \$4.25 million, to be financed by University general funds, for the Brown-Kopel Engineering Student Achievement Center project. The requested increase will cover the amount that the low bid was over the budgeted amount and will enable University to purchase two bid alternates that will enhance the quality of the classroom building

The estimated total cost of the project is \$44.0 million, to be financed by a combination of gift and University general funds.

Previous Approvals: At its meeting on June 5, 2015, the Board of Trustees adopted a resolution that approved the initiation of the Brown-Kopel Engineering Student Achievement Center project, and at its meeting on September 5, 2015, the Board of Trustees approved the project architect and construction manager selections.

At its meeting of February 3, 2017, the Board of Trustees approved the project program, site, budget, funding plan, and schematic design for the Brown-Kopel Engineering Student Achievement Center.

Project Execution Schedule: Fall 2017 – Spring 2019.

9. Farmhouse Fraternity: Approval of Lease Extension

Project Summary: The FarmHouse Fraternity currently owns a fraternity house on campus at 552 West Thach Avenue, pursuant to a Lease that expires May 9, 2043. The Fraternity would like to build a new fraternity house and has requested an extension to the term of the ground lease and an increase in the mortgage cap.

Requested Action: It is requested that the Board of Trustees adopt a resolution to authorize a 23-year Lease Extension at \$1/year for the site at 552 West Thach Avenue on

Auburn University property and change the terms of the Lease to increase the mortgage cap from \$300,000 to \$5.0 million.

10. South Auburn Fisheries Property: Approval of Disposal of Real Estate

Project Summary: The Auburn University College of Agriculture no longer has a need for the South Auburn Fisheries Property located at 5815 Lee Road 27, Auburn, AL and consisting of approximately 53.9 acres located in the City of Auburn. The College of Agriculture has moved the research performed at this location to the North Auburn Fisheries Unit and no longer has a need for this parcel of land. The United States Department of Agriculture (USDA) has expressed an interest in acquiring this property.

Requested Action: It is requested that the Board of Trustees adopt a resolution to authorize the sale, exchange, or lease of this property with the USDA.

B. Joint Academic Affairs and AUM Committee

1. Proposed Master of Science in Computer Science at Auburn University at Montgomery

The College of Arts and Sciences has submitted a proposal to create a Master of Science in Computer Science. This degree proposal includes four concentrations: High Performance Computing, Data Analytics, Computer and Cybersystems Security, and General Computer Science. The aim is to provide opportunities to graduate students to tailor their studies to their unique career goals. The proposed degree program would provide Auburn University at Montgomery with a more comprehensive graduate program and position AUM to be more visible and attract more students desiring an advanced degree focused on advanced computer science knowledge and skills. The proposed M.S. in Computer Science is different from other programs offered in the state due to its options, which are not similar to any other program. High Performance Computing and Data Analytics are unique options/concentrations for an M.S. in Computer Science program in the state of Alabama. Currently there are over 100 undergraduate students enrolled in the Computer Science undergraduate program and over 80 undergraduate students enrolled in the Mathematics undergraduate program at AUM. Therefore, the proposed M.S. Program in Computer Science shall provide great opportunities for those students, as well as to students from outside AUM. The proposed degree would require 1.5 additional FTE faculty, a computer lab with a capacity of at least 25 computers, and a security networking lab. The proposal for the M.S. in Computer Science has been endorsed by the faculty of the Department Mathematics and Computer Science, the Dean of the College of Arts and Sciences, the University Graduate Council, the Provost, and the Chancellor. It is requested that the Board consider a resolution to approve the proposed M.S. in Computer Science for Auburn University at Montgomery.

2. ***Proposed Bioprocess Engineering Option in the Bachelor of Biosystems Engineering, College of Agriculture***

The Department of Biosystems Engineering is proposing a new option that provides a stronger integration between the engineering and biology fields and emphasizes processes for the conversion of natural resources into products and commodities for various industries. The option will prepare students for careers in pharmaceutical manufacturing, biofuels, and environmental engineering and who will work in government agencies as well as private industries. The department predicts an enrollment of 25 students annually and will not require any additional resources, faculty, or space.

3. ***Proposed Bachelor of Arts in Law and Justice, College of Liberal Arts***

The Department of Political Science is proposing a new Bachelor of Arts in Law and Justice for students who desire to attend law school or seek careers in legal fields. The degree is interdisciplinary in nature and emphasizes logical thinking, critical analysis, oral communication, and creating and refuting arguments. There is currently not a pre-law degree, so students planning to attend law school major in any discipline but are encouraged to (1) participate in the Pre-Law student organization that offers campus events and professional programming, (2) complete two specific courses in Political Science, and (3) participate in the Mock Trial team. Projected enrollment for the program is approximately 50 majors or double-majors within the first two years; no additional resources, faculty, or space are required.

4. ***Proposed Bachelor of Science in Neuroscience, College of Liberal Arts***

The Department of Psychology is proposing a Bachelor of Science in Neuroscience that examines all aspects of the structure and function of brains and prepares students for further study in professional schools and for careers in health-related sciences. The degree is an interdisciplinary approach that engages more than 50 faculty members from 17 academic units in the College of Liberal Arts, the College of Sciences and Mathematics, and the College of Education. It is estimated that the proposed degree would support an enrollment of 50 students annually, with no new resources, faculty, or space required.

5. ***Proposed Bachelor of Science in Sustainable Biomaterials and Packaging, School of Forestry and Wildlife Sciences***

The School of Forestry and Wildlife Sciences is proposing a new Bachelor of Science in Sustainable Biomaterials and Packaging for students interested in interdisciplinary approaches to the development of natural and renewable resources necessary to produce sustainable materials and bioenergy. The degree prepares students for professional careers in the bio-materials and packaging industries, both of which contribute substantially to Alabama's economy.

Students will work the School's Forest Products Development Center to acquire additional knowledge and skills that address sustainable practices, including waste and land no additional resources, faculty, or space are required.

6. ***Proposed Closure of the Computer Engineering Option within the Bachelor of Electrical Engineering and Subsequent Establishment of a Bachelor of Computer Engineering, Samuel Ginn College of Engineering***

The Department of Electrical and Computer Engineering is proposing (1) the closure of the current Computer Engineering Option offered within the existing Bachelor of Electrical Engineering and (2) the subsequent creation of a Bachelor of Computer Engineering degree. The degree will continue to offer students coursework in software programming and prepare them for careers as software professionals. The proposed closure of the existing option and the establishment of the degree allows the department to remain competitive with peer institutions. Projected enrollment for the program is approximately 25 students annually, with anticipated growth within the first five years. No additional resources, faculty, or space are required.

7. ***Proposed Master of Science in Cybersecurity Engineering, Samuel Ginn College of Engineering***

The Department of Computer Science and Software Engineering are proposing the establishment of a new Master of Science in Cybersecurity Engineering. The degree emphasizes the detection and prevention of cyberattacks with a curriculum that includes software engineering, forensics, systems operations, and computer science disciplines. Projected annual enrollment of 20 students; no additional resources, faculty, or space are required.

8. ***Proposed Master of Engineering, Samuel Ginn College of Engineering***

The College of Engineering is proposing a new Master of Engineering for students to design a unique program of study that addresses their professional career goals and academic needs. Students can create a degree plan across diverse engineering fields through completion of advanced technical courses, experiential learning, and research projects. Enrollment in the proposed degree is estimated to be 8-10 students during the inaugural year, with enrollment projected to be more than 50 students after the first five years. No additional resources, faculty, or space are required.

9. ***Proposed PhD in Earth Systems Science, College of Sciences and Mathematics***

Faculty in the Department of Geosciences are proposing a PhD in Earth System Science for students interested in advancing research and developing solutions to address diverse climate and environmental problems. Students will study topics such as climate change, sustainability, environmental conservation, and food systems and will be prepared for careers in a wide range of fields involving

geosciences, informatics, geography, and geographic information systems, or with federal agencies in the public sector or private industries. Projected enrollment of the program is approximately five-10 students, and no additional resources, faculty, or space are required.

10. Proposed Revisions to Chapter Three of the *Faculty Handbook*

In early 2017, the University Senate recommended three changes in faculty personnel policies contained in Chapter Three of the *Auburn University Faculty Handbook*. The first of these proposed changes simply codifies Auburn's standard practice. The second aligns our policy with those of peer institutions, without changing Auburn's policy on *de facto* tenure or prohibiting faculty members from applying for tenure or promotion prior to their fifth year. The third affords an opportunity for recognition of meritorious performance to valuable members of the Auburn faculty.

11. Establishment of Managerial Group to Enable Auburn University to Conduct Selected Classified Research Programs

The research Security Office, within the Office of the Vice President for Research and Economic Development, is proposing that two (2) At-Large positions be added to the approved list of positions known as the Managerial Group. The group is charged with the responsibility for the protection of classified information under classified contracts awarded to Auburn University.

C. Finance Committee

1. Approval of the 2017-2018 Operating Budget

Time will be allocated for discussion and approval of the 2017-2018 Operating Budget.

2. Approval of Auction Liquidity Services for Disposal of Surplus Property

Time will be allocated for discussion of the auction liquidity services for disposal of surplus property.

D. Executive Committee

1. Proposed Awards and Namings

Time will be allocated for discussion of any awards and namings.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

MILLER GORRIE CENTER LABORATORY RENOVATIONS

APPROVAL OF PROJECT INITIATION AND
SELECTION OF THE PROJECT ARCHITECT

WHEREAS, the College of Architecture, Design and Construction proposes the renovation of existing space in the first-floor of the Miller Gorrie Center to create new virtual design and construction laboratory space, which will include a visualization laboratory and student competition rooms; and

WHEREAS, the project was originally estimated to cost under \$1.0 million, but the overall cost of the latest design is now estimated to be \$1.05 million, and thus requires Board of Trustees approval; and

WHEREAS, this project will be financed by College of Architecture, Design and Construction funds; and

WHEREAS, it is recommended that the architectural firm, Inox Design of Alpharetta, Georgia, who has been working on the project design to date, be engaged as the project architect and authorized by the Board of Trustees to complete the design of the facility.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to:

1. Engage Inox Design of Alpharetta, Georgia, as project architect to consult in the development of the facility program and project design; and
2. Limit the project planning and design development to the schematic design phase until such time as the program requirements, budget, funding plan, and site are approved by the Board.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE
**MILLER GORRIE CENTER LABORATORY RENOVATIONS: APPROVAL OF
PROJECT INITIATION AND SELECTION OF THE PROJECT ARCHITECT**
DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

Consistent with standing policy, it is proposed that the Miller Gorrie Center Laboratory Renovations project be presented to the Board of Trustees through the Property and Facilities Committee for appropriate action that will approve the initiation of the project and the selection of the project architect.

Review and Consultation

The College of Architecture, Design and Construction proposes the renovation of existing space in the first-floor of the Miller Gorrie Center to create a new virtual design and construction laboratory space, which will include a visualization laboratory and student competition rooms.

This project was not previously brought to the Board of Trustees for approval because it was originally estimated to cost under \$1.0 million. However, the latest design is now estimated to cost \$1.05 million. Since Board of Trustees policy stipulates that the all new construction, renovation, and adaptation projects over \$1.0 million require Board approval, this project now requires Board of Trustees approval.

This project will be financed by College of Architecture, Design and Construction funds.

Since the inception of the project, the architectural firm, Inox Design of Alpharetta, Georgia, has been working under contract to complete the design of the laboratory. It is recommended that Inox Design be authorized by the Board of Trustees to complete the design of the facility.

If you concur, it is proposed that the request to approve the project initiation and the selection of the project architect be presented to the Board of Trustees for consideration of an appropriate resolution for approval at the meeting scheduled for September 15, 2017.

Rationale for Recommendation:

The Miller Gorrie Center Laboratory Renovations project is expected to cost in excess of \$1,000,000. Standing Board of Trustees policy stipulates that all construction, renovation/adaptation, infrastructure, or outdoor facility projects with budgets of \$1,000,000 or more, be submitted to the Board of Trustees for action.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

TONY AND LIBBA RANE CULINARY SCIENCE CENTER

APPROVAL OF PROJECT ARCHITECT AND
CONSTRUCTION MANAGER SELECTIONS

WHEREAS, at its meeting of September 16, 2016, the Board of Trustees adopted a resolution that approved the initiation of the Tony and Libba Rane Culinary Science Center project and authorized the commencement of the architect and construction manager selection processes; and

WHEREAS, the University Architect, after conducting interviews with five candidate firms, determined the architectural firm Cooper Carry, of Birmingham, Alabama, was best qualified to provide architectural services on this project; and

WHEREAS, the University Architect and Executive Director of Design and Construction, after reviewing three candidate firms, determined the firm Hoar Program Management, of Birmingham, Alabama, was best qualified to provide construction management services on this project.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to:

1. Engage Cooper Carry, of Birmingham, Alabama, as project architect to consult in the development of the facility program and project design; and
2. Engage Hoar Program Management, of Birmingham, Alabama, as construction manager to consult in the development of the facility program and manage the construction of the facility; and
3. Limit the project planning and design development to the schematic design phase until such time as the program requirements, budget, funding plan, and site are approved by the Board.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE
**TONY AND LIBBA RANE CULINARY SCIENCE CENTER: APPROVAL OF
PROJECT ARCHITECT AND CONSTRUCTION MANAGER SELECTIONS**
DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

Consistent with standing policy, it is proposed that the Tony and Libba Rane Culinary Science Center project be presented to the Board of Trustees through the Property and Facilities Committee for consideration of a resolution that approves the selection of the project architect and construction manager selections.

Review and Consultation:

During its meeting of September 16, 2016 the Board of Trustees adopted a resolution that approved the initiation of the Tony and Libba Rane Culinary Science Center project and authorized the commencement of the architect and construction manager selection processes.

Since that time, a Request for Qualifications was published for architectural services. Fourteen architectural firms submitted their qualifications, and five were interviewed by the Architect Selection Committee. The committee determined that the firm Cooper Carry, of Birmingham, Alabama, was best qualified to provide architectural services on this project. The University Architect concurs with this recommendation.

Additionally, a Request for Qualifications was published for construction management services. Three construction management firms submitted their qualifications. The committee determined that the firm Hoar Program Management, of Birmingham, Alabama, was best qualified to provide construction management services on this project. The University Architect and Executive Director of Design and Construction concur with this recommendation.

It is, therefore, appropriate that a resolution be presented to the Board of Trustees for their consideration to approve the selection of Cooper Carry, of Birmingham, Alabama, as the project architect, and Hoar Program Management, of Birmingham, Alabama, as construction manager for the Tony and Libba Rane Culinary Science Center project. If you concur, it is recommended the resolution be presented to the Board of Trustees, through the Property and Facilities Committee, for appropriate review and action at the meeting scheduled for September 15, 2017.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

PLAINSMAN PARK PLAYER DEVELOPMENT IMPROVEMENTS

APPROVAL OF PROJECT INITIATION AND
AUTHORIZATION TO COMMENCE THE PROJECT ARCHITECT AND
CONSTRUCTION MANAGER SELECTION PROCESSES

WHEREAS, the Athletics Department has proposed the construction of a new player development building at Plainsman Park; and

WHEREAS, the project will promote player development by providing indoor batting cages and general Gameday operations improvements in support of the Auburn Baseball program; and

WHEREAS, it is anticipated that this facility would be financed by a combination of gift and Athletics Department funds; and

WHEREAS, the proposed project is expected to cost in excess of \$1,000,000 and Board of Trustees policy stipulates that all construction and renovation/adaptation, infrastructure or outdoor facility projects with budgets of \$1,000,000 or more, must be submitted to the Board through the Property and Facilities Committee for action.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that the new Plainsman Park Player Development Improvements project is approved; and Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to commence the project architect and construction manager selection processes.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE

**PLAINSMAN PARK PLAYER DEVELOPMENT IMPROVEMENTS:
APPROVAL OF PROJECT INITIATION AND AUTHORIZATION TO
COMMENCE THE PROJECT ARCHITECT AND CONSTRUCTION MANAGER
SELECTION PROCESSES**

DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

Consistent with standing policy, it is proposed that the Plainsman Park Player Development Improvements project be presented to the Board of Trustees through the Property and Facilities Committee for appropriate action that will approve the initiation of the project and authorize the commencement of the project architect and construction manager selection processes.

Review and Consultation:

The Athletics Department has proposed the construction of a new player development building at Plainsman Park. This project will promote player development by providing indoor batting cages and general Gameday operations improvements in support of the Auburn Baseball program. This project will also allow existing batting cage space in Plainsman Park to be repurposed for other player development uses.

It is anticipated that this facility would be financed by a combination of gift and Athletics Department funds.

If you concur, it is proposed that a resolution initiating the Plainsman Park Player Development Improvements project and authorizing the commencement of the project architect and construction manager selection processes be presented to the Board of Trustees for approval at the meeting scheduled for September 15, 2017.

Rationale for Recommendation:

The Plainsman Park Player Development Improvements project is expected to cost in excess of \$1,000,000. Standing Board of Trustees policy stipulates that all construction, renovation/adaptation, infrastructure, or outdoor facility projects with budgets of \$1,000,000 or more, be submitted to the Board of Trustees for action.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

JANE B. MOORE SOFTBALL COMPLEX PLAYER
DEVELOPMENT IMPROVEMENTS

APPROVAL OF PROJECT INITIATION AND
AUTHORIZATION TO COMMENCE THE PROJECT ARCHITECT AND
CONSTRUCTION MANAGER SELECTION PROCESSES

WHEREAS, the Athletics Department has proposed the construction of a new player development building at the Jane B. Moore Softball Complex; and

WHEREAS, the project will promote player development by providing an indoor practice infield and batting cages, and will install additional seating in support of the Auburn Softball program; and

WHEREAS, it is anticipated that this facility would be financed by a combination of gift and Athletics Department funds; and

WHEREAS, the proposed project is expected to cost in excess of \$1,000,000 and Board of Trustees policy stipulates that all construction and renovation/adaptation, infrastructure or outdoor facility projects with budgets of \$1,000,000 or more, must be submitted to the Board through the Property and Facilities Committee for action.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that the new Jane B. Moore Softball Complex Player Development Improvements project is approved; and Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to commence the project architect and construction manager selection processes.

TO: STEVEN LEATH, President

THROUGH: DONALD L. LARGE, Executive Vice President

FROM: DAN KING, Associate Vice President for Facilities

SUBJECT: PROPERTY AND FACILITIES COMMITTEE

**JANE B. MOORE SOFTBALL COMPLEX PLAYER DEVELOPMENT
IMPROVEMENTS: APPROVAL OF PROJECT INITIATION AND
AUTHORIZATION TO COMMENCE THE PROJECT ARCHITECT AND
CONSTRUCTION MANAGER SELECTION PROCESSES**

DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

Consistent with standing policy, it is proposed that the Jane B. Moore Softball Complex Player Development Improvements project be presented to the Board of Trustees through the Property and Facilities Committee for appropriate action that will approve the initiation of the project and authorize the commencement of the project architect and construction manager selection processes.

Review and Consultation:

The Athletics Department has proposed the construction of a new player development building at the Jane B. Moore Softball Complex. This project will promote player development by providing an indoor practice infield and batting cages, and will install additional seating in support of the Auburn Softball program.

It is anticipated that this facility would be financed by a combination of gift and Athletics Department funds.

If you concur, it is proposed that a resolution initiating the Jane B. Moore Softball Complex Player Development Improvements project and authorizing the commencement of the project architect and construction manager selection processes be presented to the Board of Trustees for approval at the meeting scheduled for September 15, 2017.

Rationale for Recommendation:

The Jane B. Moore Softball Complex Player Development Improvements project is expected to cost in excess of \$1,000,000. Standing Board of Trustees policy stipulates that all construction, renovation/adaptation, infrastructure, or outdoor facility projects with budgets of \$1,000,000 or more, be submitted to the Board of Trustees for action.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

AUBURN ARENA LOCKER ROOM RENOVATION

APPROVAL OF PROJECT INITIATION AND
AUTHORIZATION TO COMMENCE THE PROJECT ARCHITECT AND
CONSTRUCTION MANAGER SELECTION PROCESSES

WHEREAS, the Athletics Department has proposed the renovation of the Men's and Women's Locker Rooms at the Auburn Arena; and

WHEREAS, the project will enhance the current team support spaces for Men's Basketball to include a new entry lobby, expanded locker room area, team meeting space, and team lounge; and

WHEREAS, the project will also include a new Women's Basketball entry lobby, expanded team space, and improved graphics; and

WHEREAS, it is anticipated that this facility would be financed by a combination of gift and Athletics Department funds; and

WHEREAS, the proposed project is expected to cost in excess of \$1,000,000 and Board of Trustees policy stipulates that all construction and renovation/adaptation, infrastructure or outdoor facility projects with budgets of \$1,000,000 or more, must be submitted to the Board through the Property and Facilities Committee for action.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that the new Auburn Arena Locker Room Renovation project is approved; and Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to commence the project architect and construction manager selection processes.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE

**AUBURN ARENA LOCKER ROOM RENOVATION: APPROVAL OF PROJECT
INITIATION AND AUTHORIZATION TO COMMENCE THE PROJECT
ARCHITECT AND CONSTRUCTION MANAGER SELECTION PROCESSES**

DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

Consistent with standing policy, it is proposed that the Auburn Arena Locker Room Renovation project be presented to the Board of Trustees through the Property and Facilities Committee for appropriate action that will approve the initiation of the project and authorize the commencement of the project architect and construction manager selection processes.

Review and Consultation:

The Athletics Department has proposed the renovation of the Men's and Women's Locker Rooms at the Auburn Arena. The project will enhance the current team support spaces for Men's Basketball to include a new entry lobby, expanded locker room area, team meeting space, and team lounge. The project will also include a new Women's Basketball entry lobby, expanded team space, and improved graphics.

It is anticipated that this facility would be financed by a combination of gift and Athletics Department funds.

If you concur, it is proposed that a resolution initiating the Auburn Arena Locker Room Renovation project and authorizing the commencement of the project architect and construction manager selection processes be presented to the Board of Trustees for approval at the meeting scheduled for September 15, 2017.

Rationale for Recommendation:

The Auburn Arena Locker Room Renovation project is expected to cost in excess of \$1,000,000. Standing Board of Trustees policy stipulates that all construction, renovation/adaptation, infrastructure, or outdoor facility projects with budgets of \$1,000,000 or more, be submitted to the Board of Trustees for action.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

JORDAN-HARE STADIUM NORTH ENDZONE VIDEOBOARD IMPROVEMENTS

APPROVAL OF PROJECT INITIATION AND
PROJECT ENGINEER SELECTION

WHEREAS, the Athletics Department has proposed the construction of a new videoboard in the North Endzone at Jordan-Hare Stadium that will replace the existing scoreboard to enhance the Gameday experience for fans; and

WHEREAS, the target schedule for this project is to complete the construction and installation of the new videoboard prior to the start of the 2018 football season; and

WHEREAS, the University Architect recommends the use of LBYD, Inc., of Birmingham, Alabama, to design the Jordan-Hare Stadium North Endzone Videoboard Improvements project; and

WHEREAS, this project will be financed by revenues generated from the project and Athletics Department funds; and

WHEREAS, the proposed project is expected to cost in excess of \$1,000,000 and Board of Trustees policy stipulates that all construction and renovation/adaptation, infrastructure or outdoor facility projects with budgets of \$1,000,000 or more, must be submitted to the Board through the Property and Facilities Committee for action.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that the Jordan-Hare Stadium North Endzone Videoboard Improvements project is approved and that Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to:

1. Engage LBYD Inc., of Birmingham, Alabama as project engineer to consult in the development of the facility program and project design; and
2. Limit the project planning and design development to the schematic design phase until such time as the program requirements, budget, funding plan, and site are approved by the Board.

TO: STEVEN LEATH, President

THROUGH: DONALD L. LARGE, Executive Vice President

FROM: DAN KING, Associate Vice President for Facilities

SUBJECT: PROPERTY AND FACILITIES COMMITTEE

**JORDAN-HARE STADIUM NORTH ENDZONE VIDEOBOARD IMPROVEMENTS:
APPROVAL OF PROJECT INITIATION AND PROJECT ENGINEER SELECTION**

DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

Consistent with standing policy, it is proposed that the Jordan-Hare Stadium North Endzone Videoboard Improvements project be presented to the Board of Trustees through the Property and Facilities Committee for appropriate action that will approve the initiation of the project and selection of the project engineer.

Review and Consultation:

The Athletics Department has proposed the construction of a new videoboard in the North Endzone at Jordan-Hare Stadium. This project will replace the existing scoreboard in the North Endzone and will enhance the Gameday experience for fans at Jordan-Hare Stadium. The target schedule for this project is to complete the construction and installation of the new videoboard prior to the start of the 2018 football season. See Attachment (1) for architectural renderings of the proposed North Endzone Videoboard.

To facilitate an accelerated design process, the University Architect recommends the approval of the firm, LBYD, Inc. of Birmingham, Alabama, as the engineer for the project. LBYD, Inc. was instrumental in the design of the successfully completed South Endzone videoboard project. Their knowledge of Jordan-Hare Stadium will result in a better and more cost effective design.

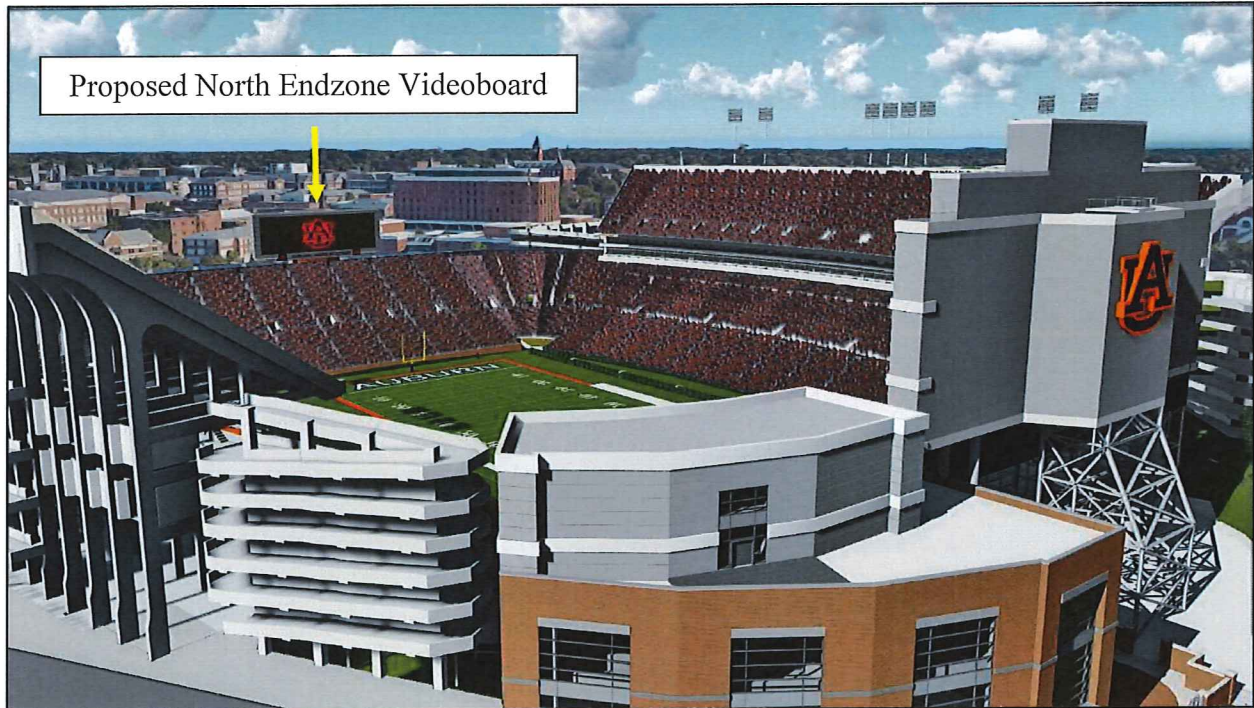
It is anticipated that this facility will be financed by revenues generated from the project and Athletics Department funds.

If you concur, it is proposed that a resolution initiating the Jordan-Hare Stadium North Endzone Videoboard Improvements project and approving the selection of the project engineer be presented to the Board of Trustees at the meeting scheduled for September 15, 2017.

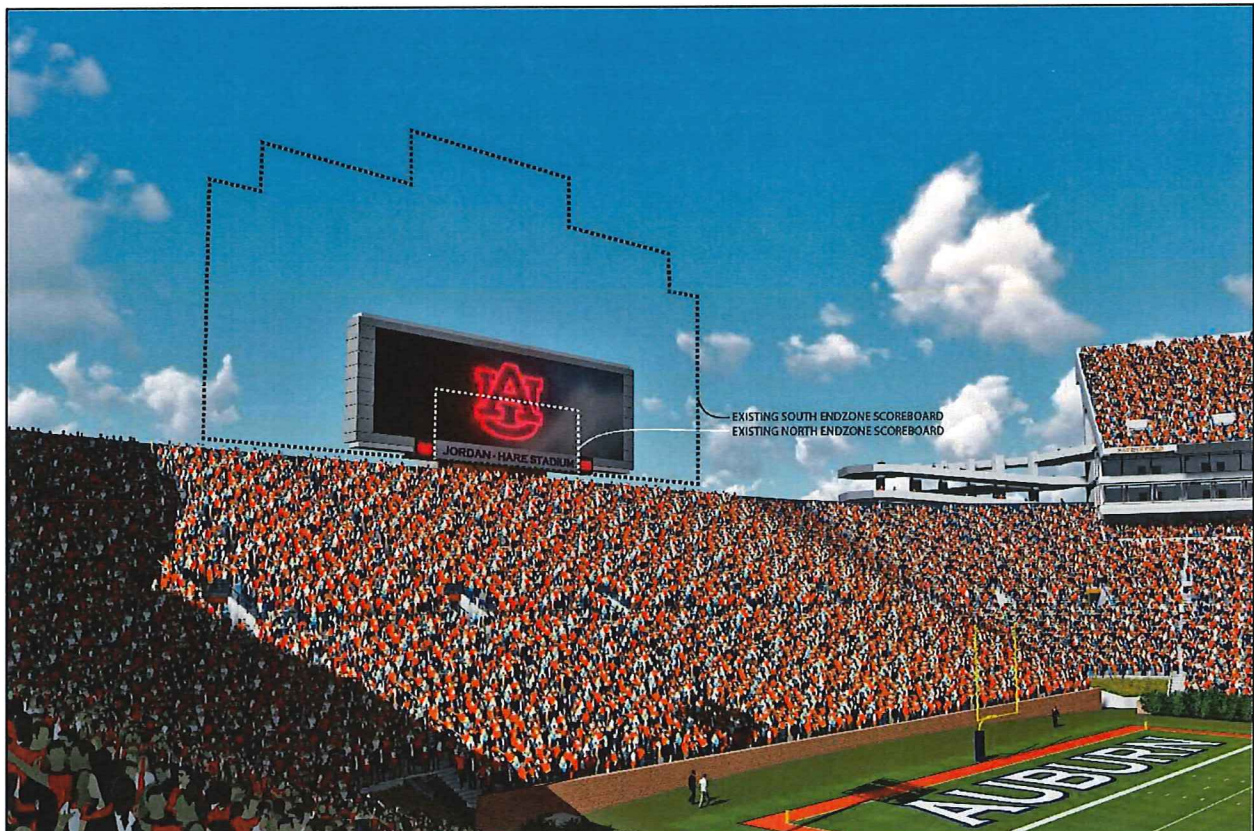
Rationale for Recommendation:

The Jordan-Hare Stadium North Endzone Videoboard Improvements project is expected to cost in excess of \$1,000,000. Standing Board of Trustees policy stipulates that all construction, renovation/adaptation, infrastructure, or outdoor facility projects with budgets of \$1,000,000 or more, be submitted to the Board of Trustees for action.

Attachment 1
Jordan-Hare Stadium North Endzone Videoboard Improvements
Architectural Renderings



View of the North Endzone Videoboard looking North



Comparative View of the North Endzone Videoboard

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

GAVIN ENGINEERING RESEARCH LABORATORY RENOVATION

APPROVAL OF ADDITIONAL SCOPE OF WORK AND BUDGET INCREASE

WHEREAS, at its meeting on June 10, 2016, the Board of Trustees adopted a resolution to approve a \$16.75 million project budget for the Gavin Engineering Research Laboratory Renovation; and

WHEREAS, the approved amount was based on the original project scope for a comprehensive renovation of 59,100 square feet of space in the existing Gavin Engineering Research Laboratory; and

WHEREAS, during the demolition, it was discovered that the supporting soil under portions of the existing basement and first floor concrete slabs have become unsound, requiring complete removal of the soil and replacement with a new structural concrete floor system, and that a deteriorated storm sewer, which was undermining part of the foundation and basement floor, must be repaired; and

WHEREAS, the budget increase required to execute this additional work under the Gavin Engineering Research Laboratory Renovation contract is \$1.25 million, to be financed by University general funds.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that the increased project scope of work for the Gavin Engineering Research Laboratory Renovation project is approved, and Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to establish a total project budget in the amount of \$18.0 million to be funded by previously budgeted Samuel Ginn College of Engineering gift and University general funds.

TO: STEVEN LEATH, President

THROUGH: DONALD L. LARGE, Executive Vice President

FROM: DAN KING, Associate Vice President for Facilities

SUBJECT: PROPERTY AND FACILITIES COMMITTEE

**GAVIN ENGINEERING RESEARCH LABORATORY RENOVATION: APPROVAL
OF ADDITIONAL PROJECT SCOPE AND BUDGET INCREASE**

DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda of the meeting scheduled for September 15, 2017.

Proposal:

It is proposed that the Gavin Engineering Research Laboratory Renovation project be presented to the Board of Trustees through the Property and Facilities Committee for the consideration of a resolution to approve additional project scope and budget increase.

Review and Consultation:

At its meeting on June 10, 2016, the Board of Trustees adopted a resolution to approve a \$16.75 million budget for the Gavin Engineering Research Laboratory Renovation project, to be funded by Samuel Ginn College of Engineering gifts and University general funds. This amount was based on the original project scope for a comprehensive renovation of 59,100 square feet of space in the existing Gavin Engineering Research Laboratory.

Since that time, construction of the building has commenced, and during the demolition, two serious unforeseen site conditions were discovered. First, the existing west basement and east first-floor concrete slabs that bear on-grade, are failing due to the severe differential settlement of soils. Additional testing has confirmed that the slabs require complete removal and replacement with a new structural concrete floor system. Second, the existing storm sewer north of the existing building has failed and needs to be repaired to prevent leaking storm water from continuing to undermine the slabs.

To execute this additional scope of work to repair the concrete slabs and storm sewer, a budget increase of \$1.25 million is required. This budget increase will be financed by University general funds.

The request to the Board of Trustees is to increase the Gavin Engineering Research Laboratory Renovation project budget from \$16.75 million to a total project budget of \$18.0 million.

If you concur, it is proposed that the revised project budget increase is presented to the Board of Trustees for consideration of an appropriate resolution for approval at the meeting scheduled for September 15, 2017.

Rationale for Recommendation:

Consistent with standing policy, revisions to facility program requirements, schematic design, and budget of the project shall be presented to the Board of Trustees through the Property and Facilities Committee for review and appropriate action.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

BROWN-KOPEL ENGINEERING STUDENT ACHIEVEMENT CENTER

APPROVAL OF PROJECT BUDGET INCREASE

WHEREAS, at its meeting on February 3, 2017, the Board of Trustees adopted a resolution to approve a \$39.75 million project budget for the Brown-Kopel Engineering Student Achievement Center project; and

WHEREAS, since that time, the project has been competitively bid, and, based on the bid results, an additional \$4.25 million is required to fully award the contract; and

WHEREAS, the requested increase will cover the amount that the low bid was over the budgeted amount and will enable University to purchase two bid alternates that will enhance the quality of the classroom building; and

WHEREAS, the requested budget increase of \$4.25 million will be financed by University general funds.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that the increased project budget for the Brown-Kopel Engineering Student Achievement Center project is approved, and Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to establish a total project budget in the amount of \$44.0 million to be funded by previously budgeted gift and University general funds.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE
**BROWN-KOPEL ENGINEERING STUDENT ACHIEVEMENT CENTER:
APPROVAL OF PROJECT BUDGET INCREASE**
DATE: SEPTEMBER 5, 2017

This memorandum requests the following item be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda of the meeting scheduled for September 15, 2017.

Proposal:

It is proposed that the Brown-Kopel Engineering Student Achievement Center project be presented to the Board of Trustees through the Property and Facilities Committee for the consideration of a resolution to approve an increase the project budget necessary to award the contract for the project.

Review and Consultation:

At its meeting on February 3, 2017, the Board of Trustees adopted a resolution to approve a \$39.75 million budget for the Brown-Kopel Engineering Student Achievement Center project to be funded by a combination of gift and University general funds.

The project was competitively bid on May 9, 2017. The low bid was \$3.6 million over the approved project budget. Based on the bid results, an increase of \$4.25 million is requested to fully award the contract. The requested increase covers the amount that the low bid was over the University's budget and allows the University to purchase the following bid alternates that will enhance the quality of the classroom building:

- Provide Second Elevator
- Provide Bosque Tree Plantings

The request to the Board of Trustees is to increase the Brown-Kopel Engineering Student Achievement Center project budget from \$39.75 million to a total project budget of \$44.0 million. This budget increase will be financed by University general funds.

If you concur, it is proposed that the revised project budget increase is presented to the Board of Trustees for consideration of an appropriate resolution for approval at the meeting scheduled for September 15, 2017.

Rationale for Recommendation:

Consistent with standing policy, revisions to facility program requirements, schematic design, and budget of the project shall be presented to the Board of Trustees through the Property and Facilities Committee for review and appropriate action.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

FARMHOUSE FRATERNITY

APPROVAL OF LEASE EXTENSION

WHEREAS, the FarmHouse Fraternity currently owns a fraternity house on campus at 552 West Thach Avenue, pursuant to a Lease that expires May 9, 2043; and

WHEREAS, the Fraternity would like to build a new fraternity house and has requested an extension to the term of the ground lease and an increase in the mortgage cap; and

WHEREAS, the request has been reviewed and recommended by the Vice President for Student Affairs, the Committee on Fraternities and Sororities, and the Office of Campus Planning and Space Management.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that the FarmHouse Fraternity Lease Extension is approved; and Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized and empowered to:

1. Execute for and on behalf of Auburn University a 23-year Lease Extension at \$1/year for the site at 552 West Thach Avenue on Auburn University property; and
2. Change the terms of the Lease to increase the mortgage cap from \$300,000 to \$5.0 million; and
3. Authorize such other or further provisions of said Lease as may be found to be desirable and in the University's best interest. All actions and instruments in this transaction shall be approved as to legal form by the General Counsel for Auburn University.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
THROUGH: DAN KING, Associate Vice President for Facilities
FROM: MARK STIRLING, Director of Real Estate
SUBJECT: PROPERTY AND FACILITIES COMMITTEE
FARMHOUSE FRATERNITY: APPROVAL OF LEASE EXTENSION
DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

Consistent with standing policy, it is proposed that the FarmHouse Fraternity Lease Extension be presented to the Board of Trustees through the Property and Facilities Committee for appropriate action that will approve a 23-year lease extension for the site located at 552 West Thach Avenue on Auburn University property. In addition, the mortgage cap has been requested to be increased to \$5.0 million.

Review and Consultation:

The Auburn University Chapter of the FarmHouse Fraternity was chartered at Auburn University in 1971. The organization currently owns a fraternity house on the Auburn campus located at 552 West Thach Avenue. The ground lease for this property expires on May 9, 2043.

FarmHouse Fraternity is requesting a modification to their existing Lease in order to finance the construction of a new fraternity house on the property. FarmHouse Fraternity currently has a mortgage cap of \$300,000, and the estimated cost for the construction of the new house will require them to borrow above this cap. As a result, they have requested the mortgage cap be increased to \$5.0 million. In addition, the mortgage company would like for the Lease to be in place for more than the remaining twenty-six (26) years to allow FarmHouse Fraternity to have the right to use the property for the length of their mortgage. As a result, Farmhouse Fraternity is requesting a 23 year extension to their existing lease.

This request was initiated by FarmHouse Fraternity through the Office of Greek Life and the Vice President for Student Affairs. The Vice President for Student Affairs indicates this request has been reviewed by a University Committee on Fraternities and Sororities and the Office of Campus Planning and Space Management. Both groups recommend that the FarmHouse Fraternity Lease Extension request be supported by the University.

If you concur, it is proposed that a resolution initiating the FarmHouse Fraternity Lease Extension be presented to the Board of Trustees for approval at the meeting scheduled for September 15, 2017.

Rationale for Recommendation:

Extension and modification of this Lease will allow the construction of a new FarmHouse Fraternity house at 552 West Thach Avenue on Auburn campus. The Vice President for Student Affairs has indicated that the fraternity is a significant and stable organization within the Auburn Greek Life System. Continuation of FarmHouse's long-time service to the campus is noted to be important; therefore, it is appropriate that their meeting and housing facilities reflect due prominence in our fraternity system and ensure the safety of their residents.

It is therefore appropriate that the proposed Lease revisions be presented to the Property and Facilities Committee and upon receiving endorsement by the Committee, be recommended to the full Board of Trustees for consideration of a resolution which authorizes the President to execute the Lease with provisions deemed to be in the best interest of Auburn University. All Lease documents for the lease of the property shall be reviewed as to form by the General Counsel of Auburn University.

PROPERTY AND FACILITIES COMMITTEE

RESOLUTION

SOUTH AUBURN FISHERIES PROPERTY APPROVAL OF DISPOSAL OF REAL ESTATE

WHEREAS, Auburn University owns certain real property known as the South Auburn Fisheries Property located at 5815 Lee Road 27, Auburn, AL and consisting of approximately 53.9 acres located in the City of Auburn; and

WHEREAS, the Auburn University College of Agriculture has moved the research performed at this location to the North Auburn Fisheries Unit and no longer has a need for this parcel of land; and

WHEREAS, the United States Department of Agriculture (USDA) has expressed an interest in negotiating a purchase, exchange, or lease of the South Auburn Fisheries property; and

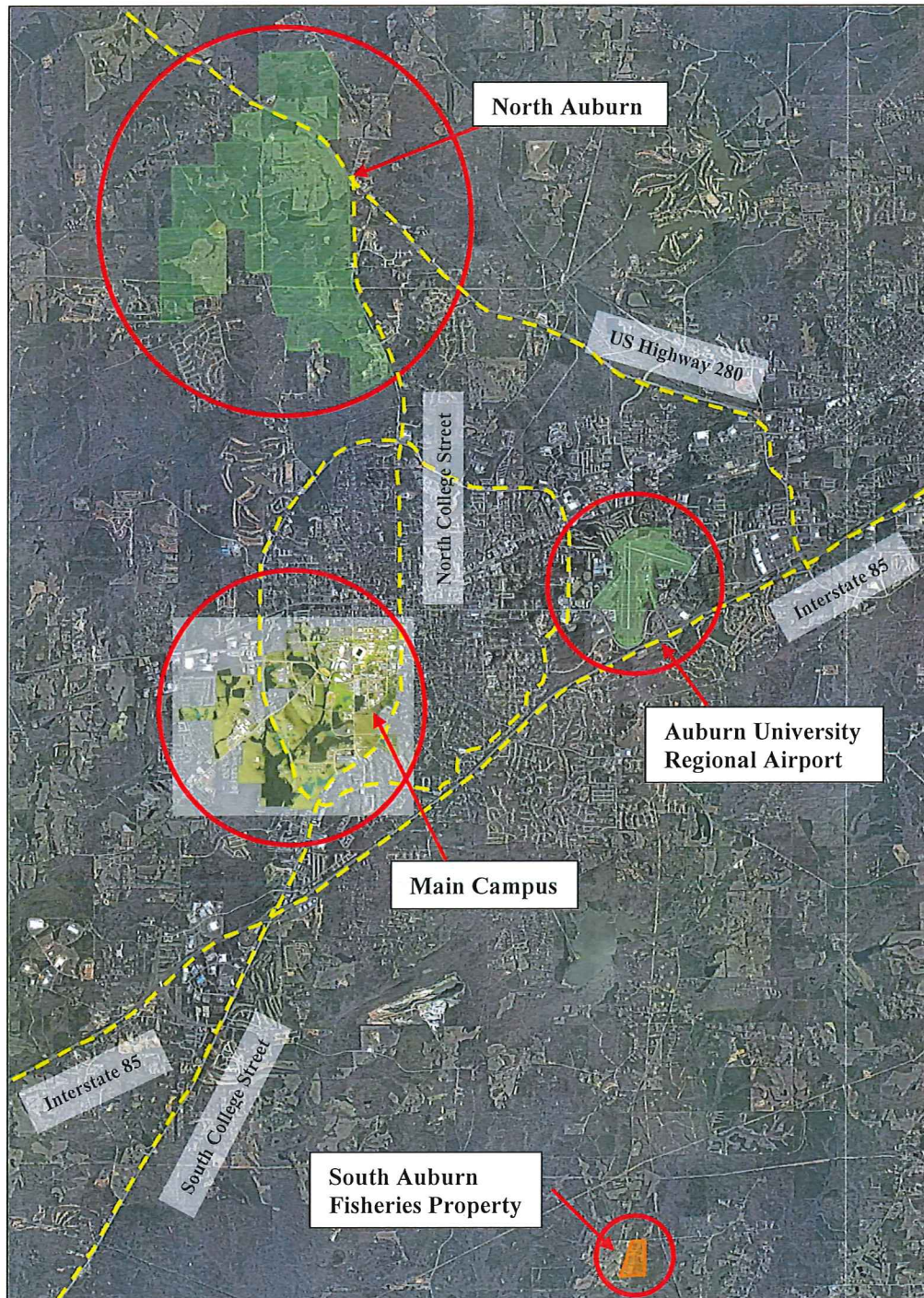
WHEREAS, a transaction is being considered that involves 53.9 acres of land owned by Auburn University and will be negotiated with the USDA; the fair market values of the parcels will be determined by MAI appraisal; the value of the transaction will equal or exceeds the value of the property conveyed; and

WHEREAS, the proposed transaction is consistent with the Real Property Procedure that was adopted by the Board of Trustees at its meeting on June 17, 2005.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that Steven Leath, President, or such persons as may be acting as President, be and the same is hereby authorized and empowered to:

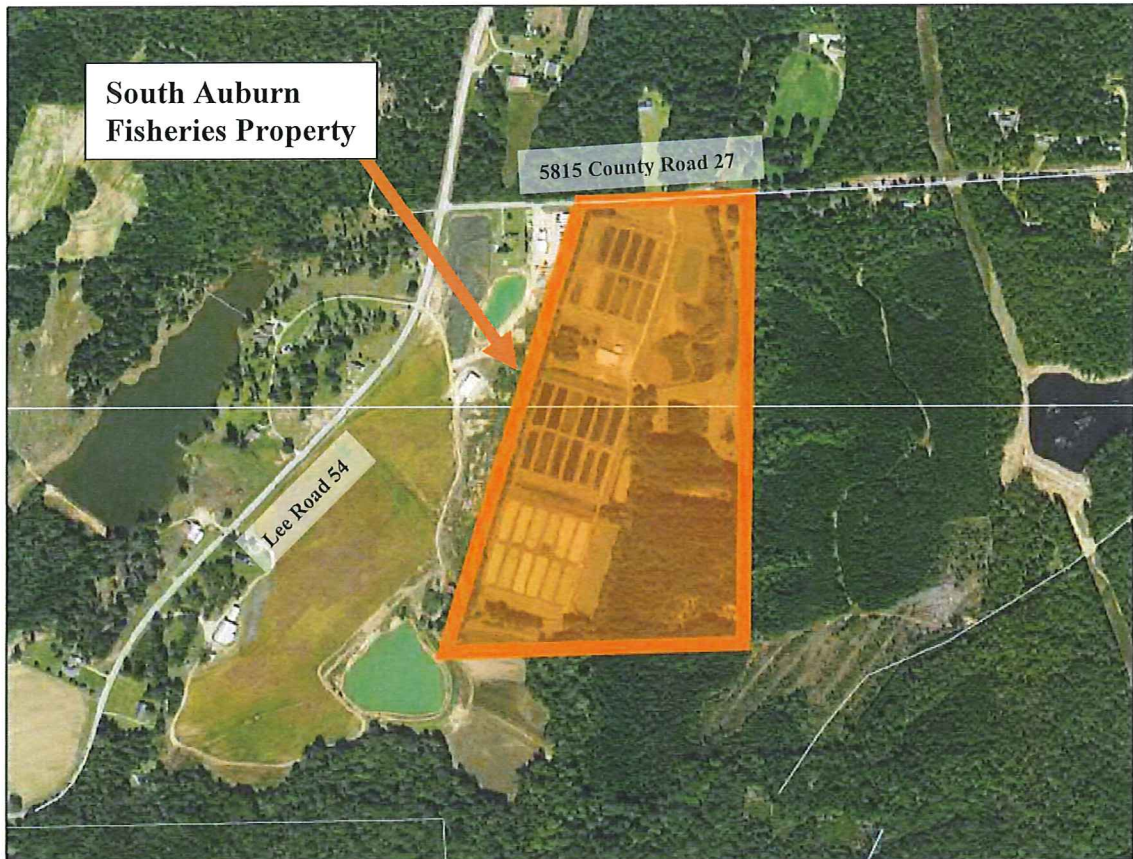
1. Take such action as necessary and desirable to negotiate the sale, exchange, or lease of 53.9 acres of Auburn University property on Attachment (1) and Attachment (2); and
2. Execute such agreements as may be necessary to complete this transaction with the understanding that all instruments required for consummation of the land transaction be reviewed as to form by the General Counsel of Auburn University.

Attachment 1
South Auburn Fisheries Property Disposal of Real Estate
Aerial Map



**Aerial Map of North Auburn, Main Campus
and South Auburn Fisheries Property**

Attachment 2
South Auburn Fisheries Property Disposal of Real Estate
Aerial Map



Aerial Map of South Auburn Fisheries Property

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
THROUGH: DAN KING, Associate Vice President for Facilities
FROM: MARK STIRLING, Director of Real Estate
SUBJECT: PROPERTY AND FACILITIES COMMITTEE
SOUTH AUBURN FISHERIES PROPERTY: APPROVAL OF DISPOSAL OF REAL ESTATE
DATE: SEPTEMBER 5, 2017

This is to request that the following item be presented to the Board of Trustees through the Property and Facilities Committee and be included on the agenda of the meeting scheduled for September 15, 2017.

Proposal:

It is proposed that AU sell, exchange, or lease approximately 53.9 acres of land owned by Auburn University at 5815 Lee Road 27, Auburn, AL (South Auburn Fisheries) to the United States Department of Agriculture (USDA). Refer to Attachment (1) and Attachment (2) for an aerial map of the property.

Review and Consultation:

Auburn University received the South Auburn Fisheries Property by donation from the Solitude Creek Joint Venture in 1996. The College of Agriculture has used the property as a research unit since that time. In recent years, the College has been consolidating its fisheries research at the North Auburn campus and no longer has a requirement for this property. The scientist that occupied the South Auburn Fisheries property will relocate his research to the North Auburn Fisheries Unit.

The USDA has approached the University with a proposal to either purchase, exchange, or lease the property. The USDA is planning to expand its fisheries research, and their plans would be accomplished more readily if the proposed expansion were to occur on the South Auburn Fisheries Property.

The 53.9 acres of Auburn University property proposed for consideration is not presently under active use, and there is no current future plan. Disposing of the South Auburn Fisheries Property will save annual maintenance and utility costs that will benefit the Fisheries budget and, if sold, may provide capital funds for the improvement of the North Auburn Fisheries Unit.

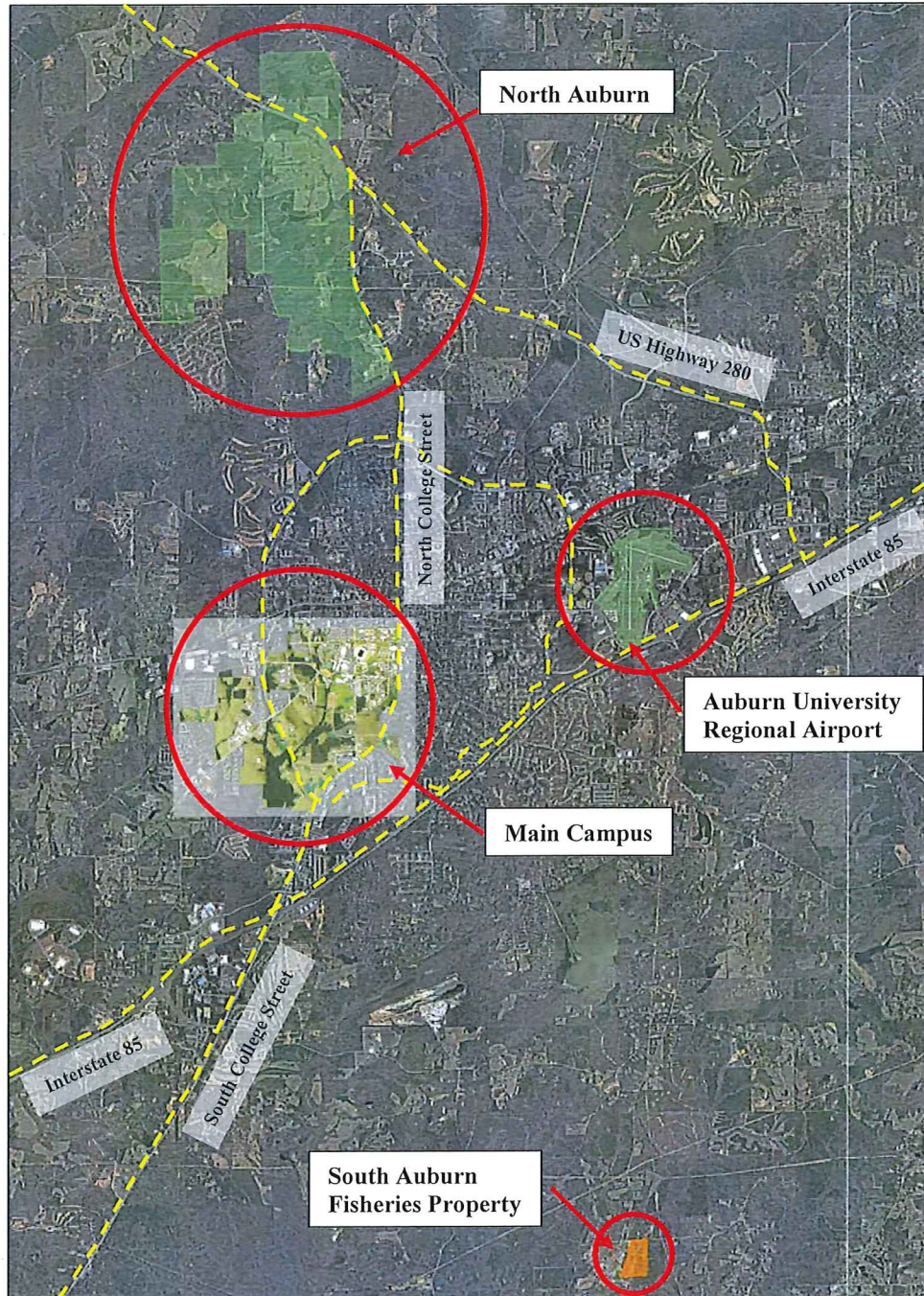
The Board of Trustees Real Estate Policy, at Section D.7, allows for the sale or lease of University property when the property is no longer required to carry out the mission of the University; or, at Section D.8, the exchange of AU property when it is in the best interest of the University. The exchange will benefit the University, in that it provides Auburn University capital funds that can be used for other projects and free up existing operations and maintenance. Consistent with Board

Policy, the property offered for sale, lease, or exchange will be appraised by an MAI appraiser and used as the basis for negotiation of the transaction.

Rationale for Recommendation:

The proposed sale, exchange, or lease of real of estate allows the University more flexibility for future use. The Board of Trustees policy outlining the procedure for the exchange of real estate will be followed in establishing the fair market value of the property. The value of the property to be exchanged is greater as determined by an MAI appraiser. It is, therefore, recommended that the sale, exchange, or lease of the property with the USDA be pursued.

Attachment 1
South Auburn Fisheries Property Disposal of Real Estate
Aerial Map



**Aerial Map of North Auburn, Main Campus
and South Auburn Fisheries Property**

Attachment 2
South Auburn Fisheries Property Disposal of Real Estate
Aerial Map



Aerial Map of South Auburn Fisheries Property

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE
LOWDER HALL INTERIOR RENOVATIONS (INFORMATION ONLY)
DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

The Harbert College of Business has proposed a project to upgrade Lowder Hall. The Lowder Hall Interior Renovations project will refurbish the first floor lobby and restrooms, as well as the second, third, fourth and fifth floors of the existing building. The scope of this work will be to replace and upgrade finishes throughout the building, such as new flooring, paint, ceilings, and light fixtures. This project is anticipated to be completed in several phases, and will be financed by the College of Business funds.

Although this project is anticipated to exceed the capital project threshold of \$1.0 million, it does not require Board of Trustees approval since the nature of the work is “repair by replacement”. Per Board policy, repair projects do not require Board of Trustees approval. Nonetheless, to ensure Board of Trustees awareness of this project, it is proposed a brief report regarding Lowder Hall Interior Renovations project be submitted, *for information only*, to the Board of Trustees through the Property and Facilities Committee.

Review and Consultation:

The Board of Trustees oversight responsibility extends to the funding, planning, design, construction, maintenance and operation of University buildings and facilities.

Rationale for Recommendation:

It is the desire of Facilities Management to keep the Board of Trustees informed about significant campus changes, including the Lowder Hall Interior Renovations project. The current memorandum is provided, *for information only*, to the Board of Trustees through the Property and Facilities Committee to be included on the agenda of the meeting scheduled for September 15, 2017.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE

**CURRENT STATUS OF NEW CONSTRUCTION/RENOVATION/
INFRASTRUCTURE PROJECTS WITH BUDGETS OF \$1,000,000 AND GREATER
(INFORMATION ONLY)**

DATE: SEPTEMBER 5, 2017

This is to request that the following proposal be submitted to the Property and Facilities Committee and included on the agenda of the Board of Trustees meeting scheduled for September 15, 2017.

Proposal:

Consistent with standing practice, it is proposed that the current status report of new construction/renovation/infrastructure projects with budgets greater than \$1,000,000 be submitted, *for information only*, to the Board of Trustees through the Property and Facilities Committee.

Review and Consultation:

The Board of Trustees at its meeting on June 4, 2001, requested that it receive a regular update on the financial status of Board approved projects. The attached list includes projects at Auburn University and outlying units.

Rationale for Recommendation:

Consistent with the request of the Board of Trustees for a current status report of new construction/renovation/infrastructure projects with budgets greater than \$1,000,000, the attached listing is provided, *for information only*, to the Board through the Property and Facilities Committee for inclusion on the agenda of the meeting scheduled for September 15, 2017.

Data as of 08/04/2017

Auburn University Facilities Management

Current Capital Projects

(Spending across Multiple Years)

Summary of Cash Flow by Project Phase

<i>Project Phase</i>	<i>Previous Approved Budget Amount</i>	<i>Current Approved Budget Amount</i>	<i>Actual Spending to Date (across multiple years)</i>	<i>Estimated Spending Assuming Remainder of Budget for FY2017</i>	<i>Estimated Spending Assuming Remainder of Budget for FY2018 & Forward</i>
Substantial Completion	29,122,977	85,122,977	75,945,798	4,067,689	5,103,651 *
Construction	158,151,195	146,801,195	49,825,206	17,154,852	79,821,137
Design	212,076,168	170,776,168	11,344,006	1,100,000	158,332,162
Planning	18,976,453	20,615,930	1,735,634	640,000	18,240,296
Totals	418,326,793	423,316,270	138,850,644	22,962,541	261,497,246 *
Other Open Capital Projects	55,586,834	55,198,107	25,621,818	5,915,258	23,661,031
Grand Totals	473,913,627	478,514,377	164,472,462	28,877,799	285,158,277 *

* On the lines with asterisks, the sum of the spending columns does not equal the current approved budget figure. The reason relates to one project: (1) "AU Regional Airport - North Side, Construct Four New T-Hangars" project under budget by \$5,839.

Current Capital Projects

ESTIMATED CASHFLOW MATRIX and ACTUAL SPENDING and ENCUMBRANCE ACTIVITY

Project Name	Project Phase	Original Approved Budget Amount	(A)		AU Bond Funding	Federal/ State or Local Funding	(B)		Estimated Spending Assuming Remainder of Budget for FY2017	Estimated Spending Assuming Remainder of Budget for FY2018 & Forward	(C)		(A)-(B)-(C) Current Open Balance (Budget less Actuals and Encumbrances)
			Current Approved Budget Amount	AU Funding (includes gifts/grants)			Actual Spending to Date (across multiple years)				Current Encumbrances Against Project		
SUBSTANTIAL COMPLETION PHASE													
AU Regional Airport T-Hangar Construction Phase I 15-093	Completed	2,000,000	2,000,000	2,000,000			1,994,161	0	0	0	0	0	*
Cater Hall Repair & Renovation Phase II 15-334	Substantial Completion	1,950,000	1,950,000	1,950,000			1,623,468	100,000	226,532	43,401	283,131		
Auburn Arena Volleyball Team Space Improvements 14-273	Substantial Completion	2,200,000	2,200,000	2,200,000			2,005,029	5,000	189,971	0	194,971		
Health Science Sector Infrastructure 15-222	Substantial Completion	6,000,000	6,000,000	6,000,000			5,635,315	150,000	214,685	220,752	143,933		
Garden of Memory - Student Memorial 14-336	Substantial Completion	1,250,000	1,250,000	1,250,000			1,171,755	10,000	68,245	6,398	71,847		
Auburn University Hotel Governor's Room, Board Room, & Restroom Renovations 15-326	Substantial Completion	995,000	995,000	995,000			852,966	34,000	108,034	33,690	108,344		
Jordan-Hare Stadium Improvements: Phase 1 Storm Drain & Sewer Repairs 15-056	Substantial Completion	4,500,000	12,827,977	12,827,977			12,240,830	100,000	487,147	323,558	263,589		
Risk Management and Safety Facility - New Building 15-150	Substantial Completion	2,800,000	2,800,000	2,800,000			2,465,750	70,000	264,250	106,776	227,474		
School of Nursing Facility 15-035	Substantial Completion	29,000,000	29,000,000	29,000,000			24,697,602	2,500,000	1,802,398	3,546,210	756,188		
Pharmaceutical Research 14-193	Substantial Completion	16,600,000	16,600,000	16,600,000			15,658,768	500,000	441,232	654,661	286,571		

Current Capital Projects

ESTIMATED CASHFLOW MATRIX and ACTUAL SPENDING and ENCUMBRANCE ACTIVITY

Project Name	Project Phase	Original Approved Budget Amount	(A)		AU Bond Funding	Federal/ State or Local Funding	(B)		Estimated Spending Assuming Remainder of Budget for FY2018 & Forward		(C)	(A)-(B)-(C)	
			Current Approved Budget Amount	AU Funding (includes gifts/grants)			Actual Spending to Date (across multiple years)	Estimated Spending Assuming Remainder of Budget for FY2017					
Band Practice Field - New Storage & Dressing Facility 15-256	Substantial Completion	3,000,000	3,000,000	3,000,000			2,637,000	100,000	263,000		89,264	273,736	
Food Animal Research Facility 15-130	Substantial Completion	3,400,000	3,400,000	3,400,000			2,801,311	48,689	550,000		99,282	499,407	
Auburn University Hotel Porte-Cochere & Front Drive Improvements 13-268	Substantial Completion	1,200,000	1,200,000	1,200,000			982,077	100,000	117,923		99,643	118,280	
Jordan-Hare Stadium - North Main Concourse Expansion 16-332	Substantial Completion	1,900,000	1,900,000	1,900,000			1,179,766	350,000	370,234		325,722	394,512	
Total Substantial Completion			85,122,977	85,122,977	0	0	75,945,798	4,067,689	5,103,651		5,549,357	3,621,983	*

Current Capital Projects

ESTIMATED CASHFLOW MATRIX and ACTUAL SPENDING and ENCUMBRANCE ACTIVITY

Project Name	Project Phase	Original Approved Budget Amount	(A)		AU Bond Funding	Federal/ State or Local Funding	(B)		Estimated Spending Assuming Remainder of Budget for FY2018 & Forward		(C)		(A)-(B)-(C)
			Current Approved Budget Amount	AU Funding (includes gifts/grants)			Actual Spending to Date (across multiple years)	Estimated Spending Assuming Remainder of Budget for FY2017			Current Encumbrances Against Project	Current Open Balance (Budget less Actuals and Encumbrances)	
CONSTRUCTION PHASE													
Mell Classroom Building 11-209	Construction	25,000,000	35,000,000	31,500,000	3,500,000		26,983,812	6,016,188	2,000,000		7,679,490	336,698	
President's House Renovation 14-296	Construction	11,051,195	11,051,195	11,051,195			5,327,909	1,200,000	4,523,286		4,908,531	814,755	
Gavin Engineering Research Laboratory - Comprehensive Renovations 14-308	Construction	16,750,000	16,750,000	16,750,000			5,891,352	2,000,000	8,858,648		9,056,448	1,802,200	
Broun Hall Building Wide Renovation 15-068	Construction	5,000,000	5,000,000	5,000,000			1,368,909	1,000,000	2,631,091		2,268,343	1,362,748	
Leach Science Ctr - Building Expansion & Partial Renovation 15-208	Construction	19,000,000	24,000,000	24,000,000			2,794,781	1,000,000	20,205,219		19,144,504	2,060,715	
Public Safety & Security Bldg - Building Renovation & Expansion 16-119	Construction	4,800,000	4,800,000	4,800,000			822,672	1,988,664	1,988,664		3,044,672	932,656	
AU Hotel & Dixon Conf Ctr - Comprehensive Renovation Of The Conference Center 15-274	Construction	3,650,000	3,650,000	3,650,000			673,733	500,000	2,476,267		2,022,871	953,396	
AU Regional Airport - Aviation Education Facility 13-285	Construction	8,700,000	8,700,000	3,700,000		5,000,000	838,496	1,100,000	6,761,504		6,701,258	1,160,246	
AU Regional Airport - South Ramp, New Maintenance Hangar 16-246	Construction	1,700,000	1,700,000	1,700,000			213,540	350,000	1,136,460		1,313,294	173,166	

Current Capital Projects

ESTIMATED CASHFLOW MATRIX and ACTUAL SPENDING and ENCUMBRANCE ACTIVITY

<i>Project Name</i>	<i>Project Phase</i>	<i>Original Approved Budget Amount</i>	<i>(A)</i>		<i>AU Bond Funding</i>	<i>Federal/ State or Local Funding</i>	<i>(B)</i>		<i>Estimated Spending Assuming Remainder of Budget for FY2018 & Forward</i>	<i>(C)</i>	<i>(A)-(B)-(C)</i>	
			<i>Current Approved Budget Amount</i>	<i>AU Funding (includes gifts/grants)</i>			<i>Actual Spending to Date (across multiple years)</i>	<i>Estimated Spending Assuming Remainder of Budget for FY2017</i>		<i>Current Encumbrances Against Project</i>	<i>Current Open Balance (Budget less Actuals and Encumbrances)</i>	
AU Rec. & Wellness Ctr - Basement, Build-Out For Personal Training & Weightlifting Center 16-249	Construction	2,900,000	2,900,000	2,900,000			790,697	600,000	1,509,303	1,932,274	177,029	
Jordan-Hare Stadium Gameday Support Facility and Locker Room Renovation 16-324	Construction	28,000,000	28,000,000	28,000,000			3,670,840	500,000	23,829,160	2,274,904	22,054,256	
Poultry Science Research & Education Ctr - New Administrative Building 16-040	Construction	2,950,000	2,950,000	2,950,000			360,311	500,000	2,089,689	2,141,512	448,177	
Bailey Small Animal Hospital - Basement, Build-Out For Clinical Pharmacology Lab & Research Space 16-260	Construction Contract	2,300,000	2,300,000	2,300,000			88,154	400,000	1,811,846	1,865,670	346,176	
Total Construction			146,801,195	138,301,195	3,500,000	5,000,000	49,825,206	17,154,852	79,821,137	64,353,771	32,622,218	

Current Capital Projects

ESTIMATED CASHFLOW MATRIX and ACTUAL SPENDING and ENCUMBRANCE ACTIVITY

<i>Project Name</i>	<i>Project Phase</i>	<i>Original Approved Budget Amount</i>	<i>(A) Current Approved Budget Amount</i>	<i>AU Funding (includes gifts/grants)</i>	<i>AU Bond Funding</i>	<i>Federal/ State or Local Funding</i>	<i>(B) Actual Spending to Date (across multiple years)</i>	<i>Estimated Spending Assuming Remainder of Budget for FY2017</i>	<i>Estimated Spending Assuming Remainder of Budget for FY2018 & Forward</i>	<i>(C) Current Encumbrances Against Project</i>	<i>(A)-(B)-(C) Current Open Balance (Budget less Actuals and Encumbrances)</i>
DESIGN PHASE											
Ag Heritage Park 98-333	Construction and Design Future Projects	2,666,320	2,666,320	2,666,320			1,427,581	0	1,238,739	0	1,238,739
Hill Residence Halls - Building Renovations & Upgrades 10-155	Design (Partial budget - Phase I only at this point)	15,859,848	15,859,848	13,373,258	2,486,590		2,125,099	0	13,734,749	1,129,562	12,605,187
Goodwin Hall - Renovation & Band Rehearsal Hall Addition 15-255	Bidding	5,500,000	5,500,000	5,500,000			343,677	0	5,156,323	162,430	4,993,893
Engineering Achievement Center 15-157	Construction Contract	39,750,000	39,750,000	39,750,000			2,267,876	100,000	37,382,124	947,854	36,534,270
Performing Arts Center - New Building 15-158	Construction Contract	65,000,000	65,000,000	65,000,000			3,674,342	500,000	60,825,658	5,068,575	56,257,083
Graduate Business Education Bldg 14-044	Construction Documents	30,000,000	30,000,000	30,000,000			1,505,340	500,000	27,994,660	754,568	27,740,092
Jordan-Hare Stadium - Press Box Renovations 16-500	Pre-Design	12,000,000	12,000,000	12,000,000			91	0	11,999,909	57,972	11,941,937
Total Design			170,776,168	168,289,578	2,486,590	0	11,344,006	1,100,000	158,332,162	8,120,961	151,311,201

Current Capital Projects

ESTIMATED CASHFLOW MATRIX and ACTUAL SPENDING and ENCUMBRANCE ACTIVITY

<i>Project Name</i>	<i>Project Phase</i>	<i>Original Approved Budget Amount</i>	<i>(A) Current Approved Budget Amount</i>	<i>AU Funding (includes gifts/grants)</i>	<i>AU Bond Funding</i>	<i>Federal/ State or Local Funding</i>	<i>(B) Actual Spending to Date (across multiple years)</i>	<i>Estimated Spending Assuming Remainder of Budget for FY2017</i>	<i>Estimated Spending Assuming Remainder of Budget for FY2018 & Forward</i>	<i>(C) Current Encumbrances Against Project</i>	<i>(A)-(B)-(C) Current Open Balance (Budget less Actuals and Encumbrances)</i>
PLANNING PHASE											
Academic Classroom & Laboratory Complex 15-034	Programing (Partial budget only at this point)	4,047,007	4,047,007	4,047,007			935,374	0	3,111,633	1,789,925	1,321,708
Mell Street, West Samford Avenue, & Thach Avenue Traffic & Parking Improvements 15-311	Construction Documents	4,000,000	4,000,000	4,000,000			289,808	0	3,710,192	77,933	3,632,259
Agricultural Sciences Research Building - New Facility 15-391	Pre-Design (Partial budget only at this point)	170,500	170,500	170,500			150,900	0	19,600	0	19,600
Interdisciplinary Science Building - New Facility 15-392	Pre-Design (Partial budget only at this point)	208,946	208,946	208,946			137,837	0	71,109	54,289	16,820
Haley Center - Renovations For Relocation Of Mathematics & Statistics Department 16-110	Schematic Design (Partial budget only at this point)	500,000	500,000	500,000			61,758	0	438,242	246,833	191,409
North Auburn - New Poultry Science Infectious Disease Laboratory 16-485	Bidding	2,700,000	2,700,000	2,700,000			84,545	0	2,615,455	6,793	2,608,662
North Auburn - New Fisheries Biodiversity Research Laboratory 16-486	Bidding	2,100,000	2,100,000	2,100,000			74,912	0	2,025,088	5,458	2,019,630
AU Equestrian Center - New Equestrian Team Support Building & Barn 17-088	Design Development (Partial budget only at this point)	329,477	329,477	329,477			500	100,000	228,977	214,595	114,382
New Residence Halls - Phase 1 16-371	Budget/Contract (Partial budget only at this point)	60,000	60,000	60,000			0	40,000	20,000	0	60,000

Current Capital Projects

ESTIMATED CASHFLOW MATRIX and ACTUAL SPENDING and ENCUMBRANCE ACTIVITY

<i>Project Name</i>	<i>Project Phase</i>	<i>Original Approved Budget Amount</i>	<i>(A)</i>		<i>AU Bond Funding</i>	<i>Federal/ State or Local Funding</i>	<i>(B)</i>		<i>Estimated Spending Assuming Remainder of Budget for FY2018 & Forward</i>	<i>(C)</i>	<i>(A)-(B)-(C)</i>	
			<i>Current Approved Budget Amount</i>	<i>AU Funding (includes gifts/grants)</i>			<i>Actual Spending to Date (across multiple years)</i>	<i>Estimated Spending Assuming Remainder of Budget for FY2017</i>		<i>Current Encumbrances Against Project</i>	<i>Current Open Balance (Budget less Actuals and Encumbrances)</i>	
Campus Utility System Expansion	Planning	6,500,000	6,500,000	6,500,000			0	500,000	6,000,000	0	6,500,000	
Total Planning			20,615,930	20,615,930	0	0	1,735,634	640,000	18,240,296	2,395,826	16,484,470	
Other Open Capital Projects	Various Stages		55,198,107	48,320,438	0	6,877,669	25,621,818	5,915,258	23,661,031	14,036,836	15,539,453	
GRAND TOTAL			478,514,377	460,650,118	5,986,590	11,877,669	164,472,462	28,877,799	285,158,277	94,456,751	219,579,325	*

* On the lines with asterisks, the sum of the spending columns does not equal the current approved budget figure. The reason relates to one project: (1) "AU Regional Airport - North Side, Construct Four New T-Hangars" project under budget by \$5,839.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE

**QUARTERLY REPORT FOR PROJECTS COSTING MORE THAN \$500,000
BUT LESS THAN \$1,000,000 – 3rd QTR FISCAL YEAR 2017** *(For Information Only)*

DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda of the meeting scheduled for September 15, 2017.

Proposal:

The Board of Trustees, at its meeting on April 11, 2014, adopted a resolution stipulating that all projects with a total cost in the range of \$500,000 to \$1,000,000 be reported quarterly. The intent of this report is to keep the Property and Facilities Committee informed of those projects as they are occurring on campus. Consistent with standing policy, it is proposed that this report be submitted for information only.

Review and Consultation:

Projects initiated in the 3rd Quarter of Fiscal Year 2017 and costing more than \$500,000 but less than \$1,000,000 are listed in the following table.

3rd Quarter FY 2017 Projects \$500,000 - \$1,000,000	Project Number	Account Number	Cost
Mell Street - Install a New Domestic Water Line Between Samford Avenue and PO Davis Dr	15-185	922930-102048-P100	\$978,000
Jordan-Hare Stadium - Suite 4325, Renovations & Refurbishments	17-054	922943-102048-P100	\$975,000
Jordan-Hare Stadium - West Side, Renovate Restrooms On Concourse & Club Levels	17-100	922944-102048-P100	\$782,195
JC Smith Museum Of Art - Grand Gallery, Lobby & Cafe, Acoustic Improvements	15-372	922849-102048-P100	\$734,190
AU Hotel & Conference Center - Guest Rooms, Provide New PTAC Units With Enclosures	16-267	923000-102048-P100	\$610,000

Rationale for Recommendation:

Consistent with standing policy, this report is submitted to the Board of Trustees through the Property and Facilities Committee for information at the meeting scheduled for September 15, 2017.

TO: STEVEN LEATH, President
THROUGH: DONALD L. LARGE, Executive Vice President
FROM: DAN KING, Associate Vice President for Facilities
SUBJECT: PROPERTY AND FACILITIES COMMITTEE
PROJECT STATUS REPORT
DATE: SEPTEMBER 5, 2017

This memorandum requests the following proposal be presented to the Board of Trustees through the Property and Facilities Committee and included on the agenda at the meeting scheduled for September 15, 2017.

Proposal:

It is proposed that a brief report regarding the status of Board of Trustees approved capital projects be submitted, *for information only*, to the Board of Trustees through the Property and Facilities Committee.

Review and Consultation:

The responsibility of the Board of Trustees extends to the oversight of funding, planning, design, construction, maintenance and operation of University buildings and facilities. The date of project establishment in the development process is often separated by years from the date of project completion or building dedication. This Project Status Report is intended to continually inform interested parties of the status of projects previously approved by the Board of Trustees.

PROJECT/PHASE

STATUS

Projects in Planning Stage:

- Equine Sciences – New Facilities Phase I
- Agricultural Sciences Research Building
- Interdisciplinary Science Building
- Tony and Libba Rane Culinary Science Center
- New Student Housing

On hold pending funding
Initiated November 2015
Initiated November 2015
Initiated September 2016
Initiated September 2016

Projects in Design Stage:

- Relocation of Sports Medicine and Other Team Functions from the Coliseum
- Jordan-Hare Stadium Improvements
- Academic Classroom & Laboratory Complex
- Haley Center Quad Renovation
- Equestrian Facility Improvements

Initiation Approved

On hold

Initiated February 2015
Initiated February 2015
Initiated June 2016
Initiated February 2017

Projects with Final Board of Trustees Approval:

- Graduate Business Education Building
- Brown-Kopel Engineering Student Achievement Center
- Poultry Infectious Disease Biocontainment Research Facility Relocation
- Fisheries Biodiversity Laboratory Relocation
- Jordan-Hare Stadium Press Box Renovation
- Mell Street and Thach Ave Traffic and Parking Improvements
- Bailey Small Animal Teaching Hospital Basement Build-Out
- Band Building Phase III

Final Approval

Approved September 2016
Approved February 2017
Approved April 2017

Approved April 2017
Approved April 2017
Approved April 2017
Approved April 2017
Approved April 2017

Projects in Construction Stage:

- Repairs and Renovations to President's Home
- Gavin Engineering Research Lab Renovation
- Broun Hall Renovation
- L-Building & Engineering Shop Buildings Demolition
- Public Safety Building Expansion
- AUHCC Ballroom Renovation
- Recreation & Wellness Center Basement Build-Out
- Jordan-Hare Stadium Gameday Support Facility and Locker Room Renovation
- Jay and Susie Gogue Performing Arts Center
- Airport Aviation Education Facility
- Airport Maintenance Hangar
- Leach Science Center Addition
- Poultry Research Farm Unit Relocation Phase II- Administration Building
- Campus Utilities System Expansion Improvements

Approved April 2016
Approved June 2016
Approved June 2016
Information Only September 2016
Approved November 2016
Approved February 2017
Approved February 2017
Approved February 2017

Approved February 2017
Approved February 2017
Approved April 2017
Approved April 2017
Approved April 2017

Approved June 2017

Recently Completed:

- Food Animal Research Facility
- AUHCC Porte-Cochere & Front Drive Improvements

Completed May 2017
Completed June 2017

- | | |
|--|-----------------------|
| • Band Practice Complex—Dressing Rooms, Storage & Turf | Completed August 2017 |
| • Jordan-Hare Stadium North Main Concourse Widening | Completed August 2017 |
| • Pharmaceutical Research Building | Completed August 2017 |
| • School of Nursing Facility | Completed August 2017 |
| • Mell Classroom Building | Completed August 2017 |

AUBURN MONTGOMERY COMMITTEE
AND
ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED MASTER OF SCIENCE IN COMPUTER SCIENCE

WHEREAS, a Master of Science in Computer Science is designed to provide students with the foundational decision making and analytical skills they need to help our society understand and solve complex computer science problems; and

WHEREAS, the College of Arts and Sciences at Auburn University at Montgomery wishes to create a Master of Science in Computer Science with the following concentrations: High Performance Computing, Data Analytics, Computer and Cybersystems Security, and General Computer Science; and

WHEREAS, the proposed program would provide Auburn University at Montgomery with a more comprehensive graduate computer science program with collaboration between colleges and departments; and

WHEREAS, the proposed program would enhance enrollment of students by providing them with the opportunity to tailor their studies to their unique career goals; and

WHEREAS, the proposed program would position Auburn University at Montgomery to be more visible and attract more students interested in making themselves more marketable by enhancing their advanced computer science exposure and knowledge; and


WHEREAS, the proposed program would require 1.5 additional FTE faculty (approx. \$130,000), a computer lab with a capacity of at least 25 computers (approx. \$20,000), and a security networking lab (approx. \$8,000); and


WHEREAS, the proposal for the Master of Science in Computer Science has been endorsed by the Department of Mathematics and Computer Science faculty, the Dean of the College of Arts and Sciences, the University Graduate Council, the Provost, and the Chancellor,

NOW, THEREFORE, BE IT RESOLVED by the Auburn University Board of Trustees that the proposed Master of Science in Computer Science from the College of Arts and Sciences at Auburn University at Montgomery be approved and submitted to the Alabama Commission on Higher Education for review and approval.



OFFICE OF THE CHANCELLOR

TO: Dr. Steven Leath
President 

FROM: Dr. Carl A. Stockton
Chancellor 

SUBJECT: Proposed Board Agenda Item
Master of Science in Computer Science

Please consider including this proposal on the agenda of the September 15, 2017 meeting of the Board of Trustees.

Proposal: Auburn University at Montgomery (AUM) proposes a Master of Science in Computer Science. This degree includes four concentrations: High Performance Computing, Data Analytics, Computer and Cybersystems Security, and General Computer Science. This additional degree program will support the missions of Auburn University at Montgomery and the College of Arts and Sciences. It is designed to provide students with the foundational problem-solving and analytical skills they need to help our society understand and solve the complex computer science problems it faces. Students learn key analytical, methodological, and evaluative techniques that will equip them to work in a host of areas to tackle challenging computer science concerns. Through a program of rigorous course work, students will gain a sophisticated understanding of real-world computer science and technology related problems, and become systematic problem-solvers.

After graduation students can advance their career as computer professionals by taking various job positions in the computing industry, research centers, government and academia. Specific employment opportunities include, but are not limited to, Computer and Information System Managers, Computer and Information Security Analysts, System and Application Software Developers, System Analysts, Data Center Administrators, Data Analysts, and Computational Scientists. Also, students will have the theoretical and practical preparation for continuing their education towards the Ph.D. studies in areas of Computer Science, Computational Science, Modeling and Simulation and Applied Mathematics.

Review and Consultation: The Department of Mathematics and Computer Science faculty, the Dean of the College of Arts and Sciences, the University Graduate Council, the Provost, and I have all reviewed and recommend the degree program for approval.

The program will require 1.5 additional FTE faculty (approx. \$130,000), a computer lab with a capacity of at least 25 computers (approx. \$20,000), and a security networking lab (approx. \$8,000).

Rational for Recommendation: The proposed Master of Science in Computer Science will provide students with a degree that matches their own career goals in a globally competitive marketplace and positions the university and college to become more visible and attract more students. In addition, this proposed program is critical for fulfilling demand for employees with skills they need to help our society understand and solve complex computer science problems.

It is recommended that the proposal be submitted to the Board of Trustees through the Auburn Montgomery Committee and Academic Affairs Committee and placed on the agenda at the meeting scheduled for September 15, 2017. If the Board approves, the program will then be sent for review and approval to the Alabama Commission on Higher Education.

Thank you for your kind attention.



AUBURN

MONTGOMERY®

TO: Dr. Carl Stockton, Chancellor
FROM: Dr. Mrinal Varma, Provost
DATE: August 10, 2017
RE: Proposed Master of Science in Computer Science

The College of Arts and Sciences is requesting to implement a Master of Science in Computer Science. The proposed program will have options in High Performance Computing, Data Analytics, Computer and Cybersystems Security, and General Computer Science. The program will offer AUM students specific training in computer science advanced technology and theory and is designed with theoretical and practical training that students can then tailor to their particular areas of interest. The different concentrations help make the program unique in the state and should put at ease any concerns of duplication within the state.

In order to be competitive at regional and national levels and for the benefit of its communities, the state of Alabama needs to continue its development, growth, and sustainability of a technology-based economy. You are already aware of efforts by the city of Montgomery in partnership with Maxwell Air Force Base and various state and private organizations to establish the Montgomery Internet Exchange (MIX). MIX is an Internet technology that provides high-speed internet access unique in the Southeast region. Having the MIX in central Alabama provides opportunities for developing, creating, and attracting businesses and services around it. However, the highly qualified human resources that will be needed to support these enterprises are not guaranteed. The proposed M.S. in Computer Science aims to provide a sustained flow of qualified human resources in the computing field, which will be needed in Montgomery and the River Region.

According to the U.S. Bureau of Labor Statistics, the number of new jobs in Computer Science related fields in Alabama is approximately 1,140 per year. This is projected to remain fairly consistent over time for a total number of openings of 5,700 over the next five years. For the SREB region, the estimate is more than 244,050 over the next five years. According to the Bureau of Labor Statistics, for the United States as a whole, the number of job openings is projected to be around 541,900.


AUBURN UNIVERSITY AT MONTGOMERY

Office of the Provost

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TO: Dr. Mrinal Varma, Provost
FROM:  Dr. Michael Burger, Dean
DATE: August 07, 2017
RE: Proposed Master of Science in Computer Science

We request that the proposed M.S. in Computer Science be added to the Board of Trustees agenda for the September 15, 2017 meeting.

Program Purpose and Description: The purpose of the proposed M.S. in Computer Science is to offer AUM students specific training in computer science advanced technology and theory. The program is designed with theoretical and practical training that students can then tailor to their particular areas of interest; thus, the four concentration options: High Performance Computing, Data Analytics, Computer and Cybersystems Security, and General Computer Science. The proposed Master of Science in Computer Science provides students with the foundational problem-solving and analytical skills they need to help our society understand and solve the complex computer science problems it faces. Students will be trained in the methods and approaches of computer science, and, in the process, learn key analytical, methodological, and evaluative techniques that will equip them to work in a host of areas to tackle challenging computer science concerns. Through a program of rigorous course work, students will gain a sophisticated understanding of real-world computer science and technology related problems, and will be trained to become problem-solvers. The skill set developed through the program would be of notable value for persons seeking work in state and local entities, including government and other non-profit sectors, as well as those pursuing doctorate work.

Justification for Request: The proposed M.S. in Computer Science is different from other programs offered in the state due to its options, which are not similar to any other program. High Performance Computing and Data Analytics are unique options/concentrations for a M.S. in Computer Science program in the state of Alabama.

State Need: In order to be competitive at regional and national levels and for the benefit of its communities, the state of Alabama needs to continue its development, growth and sustainability of a technology-based economy. To this end the state of Alabama should promote education, training and development of high qualified human resources in the computing fields. For example, in the Montgomery area efforts by the city in partnership with Maxwell Air Force Base

and various state and private organizations made possible the establishment of the Montgomery Internet Exchange (MIX). MIX is an Internet technology that provides high speed internet access unique in the Southeast region (the first in Alabama and fourth in the southeast). Having the MIX in central Alabama provides opportunities for developing, creating and attracting businesses and services around it. However, the high qualified human resources that will be needed to support these enterprises are not guaranteed. The proposed M.S. in Computer Science aims to provide a sustained flow of qualified human resources in the computing field, which will be needed in Montgomery and the River Region.

Employment Opportunities: Based on the Alabama High Demand Occupations 2012-2022 provided by the Alabama Department of Labor, computer related occupations will have strong growth. The number of new jobs in Computer Science related fields in Alabama is approximately 955 per year. This is projected to remain fairly consistent over time for a total number of openings of 4,775 over the next five years. According to the <http://www.projectionscentral.com/Home/Index> website (referred by the U.S. Bureau of Labor Statistics), the number of new jobs in Computer Science related fields in Alabama is approximately 1,140 per year. This is projected to remain fairly consistent over time for a total number of openings of 5,700 over the next five years. For the SREB region, the estimate is more than 244,050 over the next five years. According to the Bureau of Labor Statistics, for the United States as a whole, the number of job openings is projected to be around 541,900.

Student Demand-Enrollment Projection: A survey of AUM student interest was conducted using both on-line and paper-based surveys with 5 questions. The target population was AUM students majoring in mathematics, computer science and pre-engineering. We received 61 and 49 responses, respectively, from online and paper-based surveys. The questionnaire asked the students if they would be interested in pursuing a degree in Computer Science and if they would be interested in enrolling in an M.S. degree program in Computer Science at AUM. Sixty-five percent (65%) of the respondents indicated an interest in pursuing a degree in Computer Science. Fifty-six percent (56%) of the student respondents indicated that they would consider enrolling in the M.S. degree program in Computer Science at AUM.

These results suggest a likely enrollment in the Master of Science in Computer Science of 5 to 6 students in the first year of the program if 10-12 students graduate from AUM's B.S. program alone in Computer Science annually. Additionally, students from B.S. in Mathematics and Information Systems with the appropriate pre-requisite courses will be able to enter to this program.

Resource Requirements: The proposed degree would require 1.5 additional FTE faculty (approx. \$130,000), a computer lab with a capacity of at least 25 computers (approx. \$20,000), and a security networking lab (approx. \$8,000).

Recommendation: We recommend that the proposed Master of Science in Computer Science be approved by the Provost and Chancellor and be forwarded to the Board of Trustees for review and approval.

Our proposed curriculum model is attached to this request.

Curriculum

M.S. in Computer Science

Core Courses (18 credit hrs.)

CSCI 6XXX Algorithms Design and Analysis
CSCI 6XXX Software Engineering
CSCI 6XXX Database Systems
CSCI 6XXX Operating Systems
CSCI 6XXX Network Systems
CSCI 6XXX Computer Architecture

Concentration 1: High performance Computing (HPC) (9 credit hrs.)

CSCI 6XXX HPC
CSCI 6XXX Distributed Systems
CSCI 6XXX Data Intensive Computing

Concentration 2: Data Analytics (9 credit hrs.)

CSCI 6XXX Machine Learning
CSCI 6XXX Mathematical Statistics
CSCI 6XXX Optimization Theory

Concentration 3: Computer and Cybersystems Security (9 credit hrs.)

CSCI 6XXX Introduction to Computer Security
CSCI 6XXX Network Security
CSCI 6XXX Cryptography

Concentration 4: General Computer Science (9 credit hrs.)

Take 3 courses from Options 1, 2 and 3.

Options: Choose one of the following:

Thesis Option (6 credit hrs.): Thesis

Non-Thesis Option (6 credit hrs.): Take 2 courses out of the courses in other concentrations or electives.

Electives Courses:

CSCI 6XXX Secure Software Development
CSCI 6XXX Special Topics in Computer Science
CSCI 6XXX Computer Science Internship

Total credits to graduate: 33 credit hrs.

Summary:

	Thesis	Non-Thesis
Credit hours required core courses	18	18
Credit hours required in concentration	9	9
Credit hours required in support courses or electives	NA	6
Credit hours for thesis or dissertation	6	NA
Total credit hours required for completion	33	33

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED BIOPROCESS ENGINEERING OPTION IN THE BACHELOR OF BIOSYSTEMS ENGINEERING

WHEREAS, the Department of Biosystems Engineering in the College of Agriculture offers coursework leading to the Bachelor of Biosystems Engineering; and

WHEREAS, the department has proposed the establishment of a new option in Bioprocess Engineering that emphasizes the design and development of systems, processes, and equipment necessary for converting natural resources into value-added products; and

WHEREAS, the proposed option addresses the growing need for graduates who can develop solutions to engineering challenges for employers who process, handle, preserve, and convert biological materials; and

WHEREAS, the proposed option will prepare students for careers in professional engineering and agricultural fields, including government agencies and private industries such as pharmaceutical manufacturing, biofuels, and environmental engineering; and

WHEREAS, the proposed degree option will utilize existing faculty and courses and will not require any additional resources or space; and

WHEREAS, the request to establish a Bioprocess Engineering Option in the Bachelor of Biosystems Engineering has been endorsed by the Dean of the College of Agriculture, the University Curriculum Committee, the Provost, and the President.

NOW, THEREFORE, BE IT RESOLVED by Auburn University's Board of Trustees that the establishment of a Bioprocess Engineering Option in the Bachelor of Biosystems Engineering be approved and submitted to the Alabama Commission on Higher Education for review and approval.



AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 10, 2017

MEMORANDUM TO: Steven Leath
President

FROM: Timothy R. Boosinger
Provost and Vice President for Academic Affairs

SUBJECT: Agenda Item for the Board of Trustees –
Proposed Bioprocess Engineering Option in the Bachelor of
Biosystems Engineering

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: The College of Agriculture is proposing the establishment of a new option in Bioprocess Engineering in the existing Bachelor of Biosystems Engineering (CIP 14.4501).

Review and Consultation: The Department of Biosystems Engineering currently offers an undergraduate degree for students interested in developing and advancing solutions that address biological systems, natural resources and environmental problems. The proposed option emphasizes the design and development of systems, processes, and equipment that convert important natural resources into value-added products for the food, agricultural biotechnology, agricultural commodity processing bio-industrial production, and pharmaceutical/nutraceutical companies. Moreover, the proposed degree option provides a stronger integration between the engineering and biology fields.

The proposed degree option will prepare students for careers in pharmaceutical manufacturing, biofuels, and environmental engineering and who will work in government agencies as well as private industries. The department predicts an enrollment of 25 students annually and will not require any additional resources, faculty, or space.

Recommendation: It is recommended that the Board approve the proposed Bioprocess Engineering Option in the Bachelor of Biosystems Engineering. The proposed option was reviewed and approved by Auburn University's Curriculum Committee in spring 2017, and has been approved by the College Agriculture and the Provost's Office. If approved by the Auburn University Board of Trustees, the proposed option will be forwarded to the Alabama Commission on Higher Education (ACHE) for review and approval.



AUBURN UNIVERSITY

BIOSYSTEMS ENGINEERING

To: Dr. Timothy Boosinger
Provost and Vice President for Academic Affairs

THROUGH: Dr. Constance Relihan
Associate Provost for Undergraduate Studies

THROUGH: Dr. Paul Patterson
Dean, College of Agriculture

FROM: Dr. Oladiran Fasina
Head, Department of Biosystems Engineering

DATE: June 21, 2017

SUBJECT: Proposed Bioprocess Engineering Option in Bachelors of Biosystems Engineering.

We request that the following proposal be added to the Board of Trustees' agenda for the September 15, 2017 meeting.

Program Purpose and Description:

The faculty in Biosystems Engineering are requesting the creation of a new option (Bioprocess Engineering Option) in the Bachelor of Biosystems Engineering degree program. The request for this option is in response to the growing demand for engineers with the ability to process and convert biological materials into fuels, food, feed, nutraceuticals and a multitude of value-added biomaterials. Bioprocess engineers provide a bridge between the research lab and the economic, large-scale implementation of technologies used to convert biological materials to value-added products. Students will be trained to analyze the properties of biological materials and use these properties to develop beneficial uses including developing systems needed to manufacture value-added products. Currently, several of the students majoring in Biosystems have indicated strong interest in bioprocessing engineering. In fact, the major criticism we have received from our students during senior exit interviews in the last few years is the need to better integrate, or develop an option that seamlessly integrates, engineering and biology. We believe that this new option will achieve this goal. We also believe that this requested option will bring many additional students to the Biosystems Engineering major, especially those students who are interested in disciplines that combine engineering with natural sciences. Of our current 14 faculty, eight are focused on various aspects of bioprocess engineering. Finally, the requested bioprocess engineering option will complement the Ecological Engineering option established in 2010. About 40% of our students are enrolled in the Ecological Engineering option, which specifically focuses on solving environmental problems using knowledge of engineering and natural ecological principles.

Justification for Request:

In the Auburn University mission, it is stated that 'The University will serve the citizens of the State through its instructional, research and outreach programs and prepare Alabamians to respond successfully to the challenges of a global economy'. The major challenges faced by society today and in the foreseeable future include feeding a growing world population, providing for high quality of life, finding renewable sources for energy, chemicals and products, and generally seeking the attainment of a

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AUBURN UNIVERSITY

BIOSYSTEMS ENGINEERING

sustainable global future. The proposed Bioprocess Engineering option in Biosystems Engineering will, therefore, provide a focused curriculum that prepare engineers who are able to design and develop systems, processes and equipment that convert the abundant forest and agricultural resources in Alabama to value-added products. The Department of Biosystems Engineering has been contributing to the land-grant mission of Auburn University since 1919 by engaging in instructional, research and outreach activities, and developing knowledge and technology at the interface of engineering, agriculture, and forestry that ultimately improve the quality of life of Alabama citizens.

State Need: Our interaction with several industries, entities and government agencies in Alabama indicates that there is need for graduates who can develop solutions to engineering challenges faced by these stakeholders and employers when they process, handle, preserve and convert biological materials to value-added products. These industries include the food industry, agricultural biotechnology companies, agricultural commodity processing companies, bio-industrial production companies, bioremediation companies, and pharmaceutical/nutraceutical companies. Also, worth mentioning is that a significant percentage of students from peer programs pursue medical-related professional schools, often because the science courses in the curriculum enable the students to satisfy some of the pre-health requirement while at the same time, the students obtain an engineering degree that improves their critical thinking skills. There are several pre-health programs in Alabama.

Employment Opportunities: Students will have similar employment opportunities as current BSEN students. The data that we track show that all students that graduate from the undergraduate program in Biosystems engineering are employed in engineering jobs in Alabama and southeast US. The graduates from the proposed Bioprocess Engineering option will be employed in industries that design, develop (and size) equipment, systems, and methods for efficient and ecologically sound manufacturing of biological products (from cradle to grave) and biological commodities (such as proteins, enzymes, biofuels). The graduates will also be employed as engineers to troubleshoot and monitor production equipment related to the production process and also monitor product quality, overseeing inspection procedures, provide the bridge between the research laboratory and the economic, large-scale implementation of biotechnologies and food production systems.

Student Demand – Enrollment Projections: 25 students per year

Resource Requirements: All courses and instructors necessary for offering the program are in place.

Recommendation: We recommend that the proposed **Bachelors of Biosystems Engineering, Bioprocess Engineering Option** be approved by the Offices of the Provost and the President and be forwarded to the Board of Trustees and the Alabama Commission on Higher Education for review and approval.

CURRICULUM IN BIOSYSTEMS ENGINEERING

Bioprocess Engineering Option

UNIVERSITY CORE CURRICULUM	36	SEM.	Required BPEN Major Core	41	
ENGL 1100 English Composition 1	3		BSEN 2210 Engng Methods in Biosystems	3	
ENGL 1120 English Composition II	3		BSEN 2240 Biol Bioenvir Heat & Mass Trans	3	
BIOL 1020 Principles of Biology	4		BSEN 3310 Hydraulic Transport in Biosys	3	
BIOL 1030 Organismal Biology	4		BSEN 3240 Process Engng in Biosys	3	
MATH 1620 Calculus I	4		BSEN 3510 Instrumentation & Controls Biosys	3	
Social Science – 9 Hours			BSEN 4240 Bulk Biol Solids Behavior Process	3	
Core History 1: _____	3		BSEN 5280 Lifecycle Analysis for Biol. Systems	3	
Core History 2: _____	3		BSEN 5540 Biomass & Biofuels Engng	3	
Social Science Core	3		BSEN 4300 Prof Practice in Biosys Engng	2	
Humanities – 9 Hours			BSEN 4310 Engng Design for Biosystems	3	
Literature: _____	3		BSEN 5230 Waste Management & Utilz Engng	3	
PHIL 1020/1040: Ethics	3		Bioprocess Engineering Elective 1	3	
Core Fine Arts: _____	3		Bioprocess Engineering Elective 2	3	
			Bioprocess Engineering Elective 3	3	
REQUIRED SCIENCE COURSES	37	SEM.	UNIV 4AA0	0	
MATH 1620 Calculus II	4				
MATH 2630 Calculus III	4		REQUIRED OTHER ENGINEERING COURSES	13	SEM.
MATH 2650 Linear Differential Equations	3		COMP 1200 Intro to Computing	2	
CHEM 1030/1031 Chemistry I and Lab	4		ENGR 1110 Introduction to Engineering	2	
CHEM 1040/041 Chemistry II and Lab	4		ENGR 2010 Thermodynamics	3	
CHEM 2070 Organic Chemistry I and Lab	4		ENGR 2050 Statics	3	
BCHE 3200 Principles of Biochemistry	3		ENGR 2070 Mechanics of Materials	3	
BIOL 3200 Microbiology	4				
STAT 3010 Statistics for Engng and Scientists	3				
PHYS 1600 Engineering Physics I	4				

Total: 127 Semester Hours

University Core Notes 1: Students enrolled in Samuel Ginn College of Engineering are required to take 9 hours of Humanities and 9 hours of Social Science courses.

University Core Notes 2: Students in the Honors College may take equivalent honors courses. May take online version of courses:

Literature options: ENGL 2200, 2210, 2230, 2240, 2250 OR 2260

History Options: HIST 1010 and 1020 or 1210 and 1220

Fine Arts Core: arch 2600, arts 1510, 1710, 1720, 1730, MUSI 2730, 2740, 2750, MDIA 2350, ENVD 2040, THEA 2010

Social Science Core: ECON 2020 preferred

College and Department Notes

Required major courses are in bold. Grades in these courses are used to calculate the GPA in the major and to meet graduation standards.

Seniors must register for UNIV 4AA0 in the semester they plan to graduate (non-credit class for clearing graduation).

Bioprocess Engineering electives must be from the following courses: BSEN 5270, BSEN 5450, BSEN 5220, BSEN 5260, PFEN 3100, PFEN 4200, INSY 2600, MATL 5700, MATL 5750, MATL 5720, CHEN 3660, CHEN 3380

CURRICULUM FOR BIOPROCESS ENGINEERING (BPEN) OPTION
BIOSYSTEMS ENGINEERING DEPARTMENT

FRESHMAN YEAR					
COMP 1200 Intro to Computing	2		ENGR 1110 Intro to Engineering		2
MATH 1610 Calculus 1	4		MATH 1620 Calculus II		4
CHEM 1030/1031 Chemistry 1 & Lab	4		Tech & Civ 2 or World History 2		3
Tech & Civ 1 or World History 1	3		PHYS 1600 Engr Physics 1		4
ENGL 1100 English Composition 1	3		ENGL 1120 English Composition II		3
ENGR 1100 Engineering Orientation	0				
	16				16
SOPHOMORE YEAR					
BSEN 2210 Engng Methods for Biosystems	2		BSEN 2240 Biol Bioenvr Heat & Mass Transfer		3
ENGR 2010 Thermodynamics	3		ENGR 2070 Mechanics of Materials		3
ENGR 2050 Statics	3		CHEM 1040 Chemistry II		3
MATH 2630 Calculus III	4		CHEM 1041 Chemistry II Lab		1
BIOL 1020 Principles of Biology	4		MATH 2650 Linear Differential Equations		3
	16		Social Science Core ⁺		3
					16
JUNIOR YEAR					
BSEN 3310 Hydraulic Transport in Biosys	4		BSEN 3240 Process Engng in Biosystems		3
CHEM 2070 Organic Chemistry 1	3		BSEN 3610 Instrumentation & Controls Biosys		3
CHEM 2071 Organic Chemistry 1 Lab	1		BSEN 4240 Bulk Biol. Solids Behavior & Proces		3
STAT 3010 Statistics for Engrs & Scientists	3		BIOL 3200 Microbiology		4
BIOL 1030 Organismal Biology	4		BCHE 3200 Principles of Biochemistry		3
	15				16
SENIOR YEAR					
BSEN 5280 Lifecycle Analysis for Biol. Systems	3		BSEN 4310 Engng Design for Biosystems		3
Biosystems Engineering Elective 1	3		BSEN 5230 Waste Management & Utiliz. Engng.		3
BSEN 5540 Biomass and Biofuels Engineering	3		Biosystems Engineering Elective 3		3
BSEN 4300 Prof. Practice in Biosys Engng	2		Literature Core		3
Biosystems Engineering Elective 2	3		Fine Arts Core		3
PHIL 1020/1040	3		UNIV 4AA0 EN1 Undergrad Graduation		0
	17				15

Total of 127 SEMESTER HOURS

- The AU Bulletin lists the University Core Curriculum requirements for students in the College of Engineering. Students must complete a sequence in either Literature or History.
- Students should complete the World History or Tech and CIV course sequence to ensure that all SLOs are met. +ECON 2020 preferred.

Approved Biosystems Electives

BSEN 5270 Metabolic Engineering for Bioprocess	INSY 3600 Engineering Economy
BSEN 5450 Commercial Poultry and Livestock Housing	MATL 5700 Biomaterials
BSEN 5220 Geospatial Tech for Biosystems	MATL 5750 Microstructure and Mechanics of Skeletal Tissues
BSEN 5260 Renewable Energy Engineering in Biosystems	MATL 5720 Biomedical Applications of Polymers
PFEN 3100 Fundamentals of Polymers	CHEN 3660 Chemical Engineering Separations
PFEN 4200 Polymers from Renewable Resources	CHEN 3380 Phase and Reaction Equilibria

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED BACHELOR OF ARTS IN LAW AND JUSTICE

WHEREAS, the Department of Political Science currently offers undergraduate programs leading to the Bachelor of Arts in Political Science, the Bachelor of Arts in Public Administration, and the Bachelor of Arts in Health Services Administration; and

WHEREAS, the department proposes a new degree program, the Bachelor of Arts in Law and Justice, that will provide interdisciplinary knowledge and study for students who desire to attend law school or seek professional careers in legal fields; and

WHEREAS, the proposed degree program will engage faculty from multiple academic units to provide a curriculum that emphasizes logical thinking, critical analysis, oral communication, and creating and refuting arguments; and

WHEREAS, the proposed degree program will require students to complete a legal internship designed to support their coursework by providing practical skills and employment contacts; and

WHEREAS, the proposed degree program will utilize existing faculty and courses across multiple academic units within the College of Liberal Arts, and will not require any additional resources or space; and

WHEREAS, Auburn University will be the first institution in Alabama to offer an undergraduate degree program in Law and Justice; and

WHEREAS, the request to create this degree has been endorsed by the Dean of the College of Liberal Arts, the University Curriculum Committee, the Provost, and the President.

NOW, THEREFORE, BE IT RESOLVED by Auburn University's Board of Trustees that the proposed Bachelor of Arts in Law and Justice be approved and submitted to the Alabama Commission on Higher Education for review and approval.



AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 5, 2017

MEMORANDUM TO: Steven Leath
President

FROM: Timothy R. Boosinger
Provost and Vice President for Academic Affairs

SUBJECT: Agenda Item for the Board of Trustees – Proposed Bachelor of Arts in Law and Justice

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: The Department of Political Science is proposing the addition of a program of study leading to the Bachelor of Arts in Law and Justice (CIP 22.0000).

Review and Consultation: Faculty in the Department of Political Science, with support from the Department of Philosophy and the School of Communication and Journalism, are proposing the establishment of a new undergraduate degree program leading to the Bachelor of Arts in Law and Justice. Designed for students who desire to attend law school or seek careers in legal fields, the proposed interdisciplinary degree emphasizes logical thinking, critical analysis, oral communication, and creating and refuting arguments. Currently, Auburn students planning to attend law school may major in any discipline but are encouraged to participate in the Pre-Law program, a non-degree student organization that offers opportunities to engage in campus events and professional programming, complete two specific courses in Political Science, and participate in the Mock Trial team.

The proposed degree utilizes existing courses, including political science, philosophy, oral communication, and logic. The proposed degree will require a legal internship that enables students to support their coursework with practical skills and employment contacts. Projected enrollment for the program is approximately 50 majors or double-majors within the first two years, and growth in majors is possible as more students come to Auburn to pursue this degree. Auburn will be the first university in Alabama to offer an undergraduate Law and Justice major. No additional resources, faculty, or space are required to offer this program.


Recommendation: It is recommended that the Board approve the proposed Bachelor of Arts in Law and Justice. The proposed degree was reviewed and approved by Auburn University's Curriculum Committee in Spring 2017, and has been approved by the College of Liberal Arts and the Provost's Office. If approved by the Auburn University Board of Trustees, the proposed degree will be forwarded to the Alabama Commission on Higher Education for review and approval.

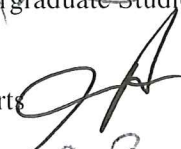



COLLEGE OF LIBERAL ARTS


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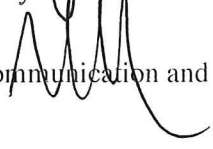
TO: **Timothy Boosinger**
Provost and Vice-President for Academic Affairs

THROUGH: **Constance Relihan** 
Associate Provost for Undergraduate Studies

THROUGH: **Joe Aistrup** 
Dean, College of Liberal Arts

FROM: **Cynthia Bowling** 
Chair, Department of Political Science

James Shelley 
Chair, Department of Philosophy

Michael Milford 
Interim Director, School of Communication and Journalism

DATE: July 17, 2017

SUBJECT: Proposed Bachelor of Arts in Law and Justice

It is requested that the following item be added to the Board of Trustees' agenda for the September 15, 2017 meeting.

Program Purpose and Description: The College of Liberal Arts is proposing the addition of a program of study leading to the Bachelor of Arts in Law and Justice for students seeking admission to law school or other graduate and professional programs.

Rationale: With support from the Department of Philosophy and the School of Communication and Journalism, faculty in the Department of Political Science propose the BA in Law and Justice as an additional option for students who desire to attend law school or seek careers in legal fields. Currently, the Department of Political Science offers a concentration in Law within the Political Science bachelor's degree program, an option currently being selected by approximately one-third of students selecting that major. While many of these students plan to attend law school, others are interested in legal issues related more broadly to political science. Students planning to attend law school can currently major in any discipline but are encouraged to participate in the Pre-Law program, a non-degree student organization that offers opportunities to engage in campus events and professional programming, complete two specific courses in Political Science, and participate in the Mock Trial team.

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The curriculum for the proposed new program emphasizes logical thinking, critical analysis, oral communication, legal research and writing, case law, and creating and refuting arguments. It will draw on courses and faculty from diverse departments in the College of Liberal Arts to create a major that focuses on this unique domain of knowledge and skill. Moreover, the proposed Law and Justice major will require a legal internship, further allowing students to support their coursework with practical skills and employment contacts.

It is anticipated that initial enrollment in the degree program will consist of the students currently concentrating on the law courses within the Political Science curriculum, who will either transfer into the Law and Justice major or double major. Students who participate in the pre-law club will also now have access to a major designed specifically to improve their success in law school admission and completion. With so many undergraduates entering Auburn University with AP or IB credit, students will have the opportunity to double major without adding a significant amount of time to undergraduate studies.

Projected enrollment for the program is approximately 50 majors or double-majors within the first two years, and growth in majors is possible as more students come to Auburn to pursue this degree. Auburn would be the first university in Alabama to offer an undergraduate Law and Justice major. No additional resources, faculty and space are required to offer this program.

Recommendation: It is recommended that the proposed BA in Law and Justice be approved by the Offices of the Provost and President and be forwarded to the Board of Trustees and the Alabama Commission on Higher Education for review and approval.

BA in Law and Justice

Freshman			
Fall	Hours	Spring	Hours
ENGL 1100 English Composition I	3	ENGL 1120 English Composition II	3
POLI 1090/1097 American Government in Multicultural World	3	Foreign Language II (College Core)	4
Foreign Language I (College Core)	4	Core Social Science ¹	3
Core Math	3	Core Science I	4
Core History	3		
	16		14
Sophomore			
Fall	Hours	Spring	Hours
Core Literature	3	Core History to complete sequence	3
Core Science II	4	COMM 1000 Public Speaking ⁴	3
Core Fine Arts	3	POLI 5570 Intro to Legal Profession (Required Course)	3
Core Humanities ² (PHIL 1010, 1020, 1050, 1090)	3	PHIL 3110 Symbolic Logic (Required course)	3
LBAR 2010 Liberal Arts Careers Preparation	2	Recommended Elective	3
	15		15
Junior			
Fall	Hours	Spring	Hours
POLI 3360 Federal Jurisdiction (Required Course)	3	Course from Group 2	3
PHIL 3640 Philosophy of Law (Required Course)	3	Course from Group 3	3
Course from Group 1	3	Recommended Electives	3
Recommended Elective	3	Free Elective	3
Free Elective	3	POLI 3380 (Evidence and Legal Reasoning)	3
	15		15
Senior			
Fall	Hours	Spring	Hours
Course from Group 1	3	Course from Group 2	3
POLI 4920 Internship (Required Course)	3-6	Course from Group 3	3
Recommended Elective	3	Recommended Elective	3
Free Elective	6	Electives	3-6
		UNIV 4AA0 University Graduation	0
	15-18		12-15
Total Hours: 120			

¹ POLI 1050 is recommended.

² If Literature requirement was completed prior to Fall 2013, Core Humanities must cover SLO 3.

³ Students must see their advisers to identify approved courses for Groups 1, 2, and 3.

⁴ COMM 1000 fulfills SLO 7.

BA in Law and Justice
Course Options

Skills Group 1 Courses (6 hours)

Ethics, Logic, & Theory

Choose 2

PHIL 3100 Intermediate Ethics

PHIL 3500: Epistemology

PHIL 3660: Applied Ethics

PHIL 4110: Advanced Logic

Can count only 1 of following

PHIL 3600: Political Philosophy

POLI 3020: Intro to Political Theory

Skills Group 2 Courses (6 hours)

Const. Law, Moot Court, & Legal Research

Choose 2

POLI 4010: Separation of Powers

POLI 4020: First Amendment

POLI 4030: Civil Rights

POLI 4040: Criminal Law

Skills Group 3 Courses (6 hours)

Communication & Conflict Resolution

Choose 2

COMM 3100: Speaking Before Audiences

COMM 3110: Persuasion

COMM 3300: Communication & Conflict

COMM 3600: Rhetorical Theory

COMM 3700: Argumentation

COMM 4700: Legal Communication

PHIL 3550: Philosophy of Language

POLI 3340: Intro to Conflict Resolution

POLI 5340: Theory & Pract. of Mediation

POLI 5570: Advanced Mediation

Recommended Electives (15 hours)

Choose 5

Any additional course from Groups 1,2, or 3

HADM 3700: Health Law

POLI 3300: Law and Society

POLI 3320: Judicial Process

POLI 3350: Controversies in Const. Law

POLI 3370: Federal Indian Law

POLI 4340: Contemp. Pol. Theory

POLI 5170: Election Law

POLI 5180: Administrative Law

POLI 5570: Mock Trial

ACCT 2700: Business Law

AGEC 4070: Agricultural Law

ANTH 4300: Anthropology of Law

AVMG 5090: Aviation Law and Policy

BSCI 4850: Construction Law

CIVL 5480: Legal Aspects of Civil Engineering

CMJN 4000: Mass Media Law & Regulations

ECON 3100: Law and Economics

ENGL 4150: Language and the Law

FORV 5540/5543: Environmental Law

FORV 5550/5553: Property Law

PHIL 3620 Contemp. Pol. Philosophy

SOCY 5200: Sociology of Law

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED BACHELOR OF SCIENCE IN NEUROSCIENCE

WHEREAS, the Department of Psychology currently offers an undergraduate program leading to the Bachelor of Science in Psychology; and

WHEREAS, the department proposes a new degree program, the Bachelor of Science in Neuroscience, that will provide interdisciplinary knowledge and study for students seeking advanced graduate and professional medical study, or who desire to pursue careers in health-related fields; and

WHEREAS, the proposed degree will engage faculty from multiple departments to provide a curriculum that examines human neurological development, recovery from neurological injury, and various neurological disorders; and

WHEREAS, the proposed degree program will utilize existing faculty and courses in the Colleges of Liberal Arts, Education, and Sciences and Mathematics, and will not require any additional resources or space; and

WHEREAS, the request to create this degree has been endorsed by the Dean of the College of Liberal Arts, the Dean of the College of Education, the Dean of the College of Sciences and Mathematics, the University Curriculum Committee, the Provost, and the President.

NOW, THEREFORE, BE IT RESOLVED by Auburn University's Board of Trustees that the proposed Bachelor of Science in Neuroscience be approved and submitted to the Alabama Commission on Higher Education for review and approval.



AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 5, 2017

MEMORANDUM TO: Steven Leath
President

FROM: Timothy R. Boosinger
Provost and Vice President for Academic Affairs

SUBJECT: Agenda Item for the Board of Trustees – Proposed Bachelor of Science in Neuroscience

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: The College of Liberal Arts is proposing the addition of a program of study leading to the Bachelor of Science in Neuroscience (CIP 26.1501).

Review and Consultation: Faculty in the Department of Psychology are proposing the establishment of a new undergraduate degree program in Neuroscience. The degree examines all aspects of the structure and function of brains and prepares students for further study in professional schools and graduate programs and for careers in health-related sciences. With an emphasis on studying and advancing improvements to the human brain, the proposed degree will examine normal neurological development, recovery from neurologic injury, and neurological disorders.

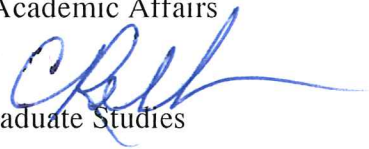
The proposed BS in Neuroscience addresses a growing interest in the field of neuroscience and incorporates technological advances and applications to study and understanding of learning, brain development, brain health and recovery. Providing an interdisciplinary approach, the proposed curriculum advocates a strong foundation in core sciences, including the disciplines of psychology, mathematics, biology, chemistry, computer science, and physics. The proposed degree engages more than 50 faculty members from 17 academic units in the College of Liberal Arts, the College of Sciences and Mathematics, and the College of Education, with the Department of Psychology serving as the primary academic and administrative unit. It is estimated that the proposed degree would support an enrollment of 50 students annually, with no new resources, faculty, or space required.


Recommendation: It is recommended that the Board approve the proposed Master of Science in Neuroscience. The proposed degree was reviewed and approved by Auburn University's Curriculum Committee in Spring 2017, and has been approved by the Colleges of Liberal Arts, Sciences and Mathematics, and Education, as well as the Provost's Office. If approved by the Auburn University Board of Trustees, the proposed option will be forwarded to the Alabama Commission on Higher Education for review and approval.


COLLEGE OF LIBERAL ARTS

OFFICE OF THE DEAN

TO: **Timothy Boosinger**
Provost & Vice President for Academic Affairs

THROUGH: **Constance Relihan**
Associate Provost for Undergraduate Studies 

THROUGH: **Joe Aistrup**
Dean, College of Liberal Arts 

FROM: **Peter Chen** 
Head, Department of Psychology

DATE: July 25, 2017

SUBJECT: Proposed Bachelor of Science in Neuroscience

It is requested that the following item be added to the Board of Trustees' agenda for the September 15, 2017 meeting.

Program Purpose and Description: The College of Liberal Arts is proposing the addition of a program of study leading to the Bachelor of Science in Neuroscience (CIP 26.1501). Administered by the Department of Psychology, the proposed educational program will connect diverse courses and faculty to create a new degree that examines all aspects of the structure and function of brains and prepares students for further study in professional schools and graduate programs and for careers in health-related sciences.

Rationale: The proposed BS in Neuroscience would address a growing interest in the field of neuroscience and would offer students additional undergraduate research opportunities often necessary for admission into graduate and professional programs. Additionally, by emphasizing the psychological, social, and biological foundations of behavior, the proposed neuroscience program would prepare students to perform well on the Medical College Admission Test and to succeed in medical school. Involving more than 50 faculty members across 17 academic units, the proposed curriculum includes coursework from the College of Liberal Arts, the College of Education, and the College of Sciences and Mathematics.

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As part of the program, students would study topics that include the neurological impact of closed head injuries, neurodegenerative disorders, developmental and intellectual disabilities, autism, and other diseases of development such as schizophrenia. Additionally, topics including substance abuse would be studied as part of the field of behavioral neuroscience.

Employment opportunities for graduates of the program include diverse careers in health-related sciences, such as Audiology, Clinical Psychology, Dentistry, Food Science, Law (e.g., neuroethics), Medicine (MD, DO), Neuropsychology, Optometry, Pharmacy, Physical Therapy, research and teaching, and Veterinary Science.

Nationally, more than 80% of similar educational programs are administered by Psychology units. It is estimated that the program would enroll approximately 50 majors within four years, and would be the second undergraduate neuroscience program in Alabama. No new resources, faculty, or space are required to offer the program.

Recommendation: It is recommended that the proposed BS in Neuroscience be approved by the Offices of the Provost and President and be forwarded to the Board of Trustees and the Alabama Commission on Higher Education for review and approval.

Proposed B.S. in Neuroscience Curriculum Model

Freshman Year

Fall	Hours	Spring	Hours
ENGL 1100 English Composition I	3	PSYC 2010 Introduction to Psychology	3
MATH 1610 Calculus I	4	ENGL 1120 English Composition II	3
CHEM 1030 Fundamental Chemistry I ¹	3	CHEM 1040 Fundamental Chemistry II ¹	3
CHEM 1031 Fundamental Chemistry I Lab	1	CHEM 1041 Fundamental Chemistry II Lab	1
BIOL 1020/1021 Principles of Biology + Lab	4	BIOL 1030/1031 Principles of Biology + Lab	4
		LBAR 2010 Liberal Arts Careers Preparation	2
	15		16

Sophomore Year

Fall	Hours	Spring	Hours
PSYC 2130 Analytics for Soc & Beh Sci	4	PSYC 3510 Behavioral Neuroscience	3
PSYC 3530 Sensation & Perception	3	CORE HISTORY II ²	3
CHEM 2070 Organic Chemistry I	3	CHEM 2080 Organic Chemistry II	3
CHEM 2071 Organic Chemistry I Lab	1	CHEM 2081 Organic Chemistry II Lab	1
CORE HISTORY I ²	3	PHYS 1510 General Physics II	4
PHYS 1500 General Physics I	4	PHIL 1030 Ethics and the Health Sciences	3
	18		17

Junior Year

Fall	Hours	Spring	Hours
PSYC 3520 Psychology of Learning	3	PSYC 3540 Cognitive Psychology	3
BIOL 3000 Genetics	4	PSYC 3620 Cognitive Neuroscience	3
CORE LITERATURE ²	3	COMM 1000 Public Speaking	3
CORE SOCIAL SCIENCE ²	3	CORE SOCIAL SCIENCE ²	3
	13		12

Senior Year

Fall	Hours	Spring	Hours
PSYC 5620 Drugs, Brain and Behavior	3	CORE FOREIGN LANGUAGE ²	4
CORE FOREIGN LANGUAGE ²	4	CORE FINE ARTS ²	3
BIOL 4100 Cell Biology	3	Major Electives	6
BIOL 4100 Cell Biology Laboratory	2	Elective	1
Major Electives	3		
	15		14

Total Hours Required: 120

Major Elective Courses:

BCHE 5180, 5190; BIOL 2500, 2510; KINE 3650, 4133; PHIL 3510; PSYC 3120, 3560, 3580, 3610, 3630, 3970, 4080, 4250, 4270, 5610. MAX of 6 hours from PSYC 3910, 4930, 4967, 4997. All other departmental Directed Studies, Undergraduate Research, Honors Special Problems, Thesis, and Special Topics can be approved if relating to neuroscience (see advisor). Student must either pass the computer competency test or take COMP 1000 as one of their electives.

¹ The Chemistry 1110/1111-1120/1121 sequence can substitute for CHEM 1030/1031-1040/1041.

² Options for courses labeled CORE are in the Auburn University Bulletin under Core Curriculum

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED BACHELOR OF SCIENCE IN
SUSTAINABLE BIOMATERIALS AND PACKAGING

WHEREAS, the School of Forestry and Wildlife Sciences currently offers undergraduate programs that support the study of sustainability and the development of renewable biomaterials designed to reduce environmental impact; and

WHEREAS, the School proposes a new undergraduate degree program, the Bachelor of Science in Sustainable Biomaterials and Packaging, for students interested in developing sustainable alternatives to petroleum-based products and in developing renewable materials with less environmental impact; and

WHEREAS, the proposed degree will prepare students for professional careers in the bio-materials and packaging industries, both of which contribute substantially to Alabama's economy; and

WHEREAS, the proposed general program will be the first of its kind offered to students in the State of Alabama, and will not require any additional resources or space; and

WHEREAS, the request to create this degree has been endorsed by the Dean of the School of Forestry and Wildlife Sciences, the University Curriculum Committee, the Provost, and the President.

NOW, THEREFORE, BE IT RESOLVED by Auburn University's Board of Trustees that the proposed Bachelor of Science in Sustainable Biomaterials and Packaging be approved and submitted to the Alabama Commission on Higher Education for review and approval.



AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 5, 2017

MEMORANDUM TO: Steven Leath
President

FROM: Timothy R. Boosinger
Provost and Vice President for Academic Affairs

SUBJECT: Agenda Item for the Board of Trustees – Proposed Bachelor of Science in Sustainable Biomaterials and Packaging

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: The School of Forestry and Wildlife Sciences is proposing the addition of a program of study leading to the Bachelor of Science in Sustainable Biomaterials and Packaging (CIP 03.0599).

Review and Consultation: Faculty in the School of Forestry and Wildlife Sciences are proposing the establishment of a new undergraduate degree, the Bachelor of Science in Sustainable Biomaterials and Packaging, for students interested in developing approaches to reducing use of petroleum-based products and in developing materials with less environmental impact. The degree provides interdisciplinary approaches to the study and development of natural and renewable resources necessary to produce sustainable materials and bioenergy. Emphasizing a curriculum that incorporates forestry, science, engineering, and business, the proposed degree will prepare students for professional careers in the bio-materials and packaging industries, both of which contribute substantially to Alabama's economy.

As part of their curriculum, students will have the opportunity to work the School's Forest Products Development Center to acquire additional knowledge and skills that address sustainable practices, including waste and landfill reduction. Projected enrollment of the program is approximately 100-125 students annually, and no additional resources, faculty, or space are required.

Recommendation: It is recommended that the Board approve the proposed Bachelor of Science in Sustainable Biomaterials and Packaging. The proposed degree was reviewed and approved by Auburn University's Curriculum Committee in Spring 2017, and has been approved by the School of Forestry and Wildlife Sciences and the Provost's Office. If approved by the Auburn University Board of Trustees, the proposed degree will be forwarded to the Alabama Commission on Higher Education for review and approval.



SCHOOL OF FORESTRY AND WILDLIFE SCIENCES

Date: July 18, 2017

To: Dr. Timothy Boosinger, Provost & VP for Academic Affairs

Through: Dr. Constance Relihan, Assoc Provost for Undergraduate Studies

Through: Dr. Jananki Alvalapati, Dean, School of Forestry & Wildlife Sciences

From: Dr. Scott Enebak, Associate Dean for Academic Affairs, SFWS

Re: Item for the Board of Trustees – Establishment of the BS degree in Sustainable Biomaterials and Packaging

AS
SE

We are requesting that the following item be added to the Board of Trustees' agenda for their September 15, 2017.

Program Purpose and Description: The School of Forestry and Wildlife Sciences is requesting to create and add a new BS degree in Sustainable Biomaterials and Packaging under CIP 03.0599. This new degree will provide students with rigorous training in fundamental theories, concepts, quantitative tools, analytical technologies and research skills that are used in the development and use of sustainable biomaterials in a range of forest products and packaging industries. Using Science, Technology, Engineering, & Mathematics (STEM) as the base, this program draws from several disciplines including forestry, engineering, chemistry, architecture and business. Since the forest products industry is directly involved with stand productivity and manufacturing, the SFWS has great support from stakeholders across the state of Alabama and beyond. A number of SFWS faculty have been directly involved with their research, teaching and extension and have a lot of expertise to lead this Sustainable Biomaterials and Packaging program.

Background and Review: The proposed undergraduate curriculum will satisfy several interests. First, incoming freshman will be excited to have a 21st century program that not only works to solve economic and environmental problems, but pays well in the process. Second, employers from an emerging biomaterial-based industry are having tremendous problems finding students with the right skill sets. The Forest Products Development Center (FPDC) on the Auburn University campus fields questions all the time as to why there are no students available for the industry. The packaging industry is an emerging field that desires more sustainable alternatives to a petroleum concentrated market. Currently, many of our plastics that are used as packaging products end up in landfills or oceans and take centuries to degrade.

State Need: No other four-year institutions in the state of Alabama offer this type of degree program.

3301 FORESTRY AND
WILDLIFE SCIENCES BUILDING
AUBURN, AL 36849-5418

Employment Opportunities: The Alabama agriculture and forestry-related industries account for 580,295 jobs and generate \$70.4 billion for the economy. The sustainable biomaterials and packaging industry will be supplied with undergraduate students who possess a unique suite of interdisciplinary skills. Finding an output for agricultural waste and crops and small diameter and underutilized trees will help to further stimulate the economy while relieving some of the impact of petroleum-based products. Employment opportunities within this interdisciplinary field include: Product Development Engineer, Sales Manager, Business Quality Manager, Process Engineer, Field Technician, Biological Technician, Sustainability Engineer, Quality Engineer, Quality Improvement Manager. In addition, students will be prepared for positions working in chemistry, architecture bioproducts, water and waste recycling plants, the wood products industry, the fiber-based textile industries, packaging, animal feed stock biofuels, pharmacy and cosmetics. For example, packaging is a rapidly growing industry with \$420 billion globally in total revenues. In 2013 up to 27% of the packaging market has been replaced by bio-derived plastics, and that number is expected to grow to 46% by 2018.

Student Demand / Enrollment Projections: There is currently strong support from alumni and industry to hire graduates and interns from this program. Based on student enrollment in similar degree programs at Virginia Tech, Purdue University and NC State, we expect within 6 years to have an average of 100-150 students enrolled in this new degree program.

Resource Requirements: This curriculum would be unique nationally because it utilizes supporting faculty across 5 Schools/Colleges. All courses and instructors necessary for offering the program are currently in place.

Recommendation: It is recommended that the establishment of the BS degree in Sustainable Biomaterials and Packaging (BIOP) degree be approved and forwarded to Auburn University's Board of Trustees for review and approval.

Auburn University
School of Forestry and Wildlife Sciences
Sustainable Biomaterials and Packaging (BIOP) Degree

NAME:

ID#:

FRESHMAN

FALL				SPRING			
ENGL	1100	English Composition I	3	ENGL	1120	English Composition II	3
BIOL	1020	Principles of Biology	3	BIOL	1030	Organismal Biology	3
BIOL	1021	Principles of Biology Lab	1	BIOL	1031	Organismal Biology Lab	1
MATH	1130	Pre-Calculus Trig or Higher	3	STAT	2510	Stats for Biological and Health Sciences	3
CORE	HIST	History ¹	3	CORE	SOC	History or Social Science ¹	3
INDD	1120	Industrial Design in Modern Society	3	CORE	SOC	Social Science	3
			16				16

SOPHOMORE

FALL				SPRING			
CHEM	1030	Fundamental Chemistry I	3	CHEM	1040	Fundamental Chemistry II	3
CHEM	1031	Fundamental Chemistry I Laboratory	1	CHEM	1041	Fundamental Chemistry II Laboratory	1
BIOP	2120	Frontiers of Sustainable Materials (M)	3	MKTG	3310	Principals of Marketing	3
ECON	2020	Principals of Microeconomics	3	SUST	2000	Introduction to Sustainability	3
CORE	LIT	Literature ¹	3	CORE	HUM	Literature or Humanities ¹	3
COMM	1000	Public Speaking	3	CORE	ARTS	Fine Arts	3
			16				16

JUNIOR

FALL				SPRING			
SCMN	3150	Management of Business Process	2				
INSY	3020	Occupational Safety Ergonomics	3	BIOP	4060	Economics of Bioproducts and Packaging (M)	3
BIOP	3390	Intro to Forest Products and Packaging (M)	3	BIOP	4070	Performance & Durability of Products & Packaging (M)	3
BIOP	3391	Forest and Manufacturing Operations (M)	1	BIOP	4080	Business Management for Products (M)	3
BIOP	4050	Biomass Processing Chemistry (M)	3	MKTG	4340	Marketing and New Product Development	3
MATL	2220	Materials and the Environment or Mineral Resources: Processes and Availability	1	BIOP	4360	Sustainable Biomaterials Trade and Marketing (M)	3
	or 2230						
			13				15

SENIOR

FALL				SPRING			
BIOP	4840	Sustainability and Life Cycle Assessment (M)	3	BIOP	4800	Biopolymers for Biomaterials & Packaging (M)	3
BIOP	5250	Wood Composites for Biomaterials & Packaging (M)	3	BIOP	4410	Biomaterials Product Development II (M)	1
BSEN	3530	Ag Production & Facility Tech	3	SCMN	5720	Quality and Process Improvement	3
BIOP	4400	Biomaterials Product Development I (M)	1	BSEN	4240	Fundamentals Bulk Solid Behavior & Processes	3
ENVD	4010	Elements of Design Thinking and Communication	3	FORV	4820	Forestry in the Private Sector	2
				Elect	Free	Free Elective	3
			13				15

¹ Student must complete a sequence in either Literature or History.

² Marketing is taught during sophomore year to facilitate Marketing Minors.

Courses listed with (M) are majors courses and must be completed with a 2.0 GPA average or better

120 Total Semester Hours

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED CLOSURE OF THE COMPUTER ENGINEERING OPTION WITHIN THE
BACHELOR OF ELECTRICAL ENGINEERING AND THE ESTABLISHMENT OF A
BACHELOR OF COMPUTER ENGINEERING

WHEREAS, the Samuel Ginn College of Engineering currently offers a Computer Engineering Option within the existing Bachelor of Electrical Engineering; and

WHEREAS, the unit has proposed that the Computer Engineering Option within the Bachelor of Electrical Engineering be closed, concurrent with the establishment of a program leading to the Bachelor of Computer Engineering; and

WHEREAS, the proposed Bachelor of Computer Engineering will enable Auburn's programs to remain competitive by aligning with peer institutions, and will allow students to earn dual degrees in electrical and computer engineering; and

WHEREAS, the proposed degree will continue to offer students a foundation for advanced knowledge in software programming, including database management, computer networks, and operating systems; and

WHEREAS, the proposed Bachelor of Computer Engineering will not require any additional resources, faculty, or space; and

WHEREAS, the request to create this degree has been endorsed by the Dean of the Samuel Ginn College of Engineering, the University Curriculum Committee, the Provost, and the President.

NOW, THEREFORE, BE IT RESOLVED by Auburn University's Board of Trustees that the proposed (1) closure of the Computer Engineering Option within the existing Bachelor of Electrical Engineering, and (2) the establishment of a program leading to the Bachelor of Computer Engineering be approved and submitted to the Alabama Commission on Higher Education for review and approval.



AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 5, 2017

MEMORANDUM TO: Steven Leath
President

FROM: Timothy R. Boosinger
Provost and Vice President for Academic Affairs

SUBJECT: Agenda Item for the Board of Trustees –
Proposed Closure of the Computer Engineering Option in the Bachelor of
Electrical Engineering and the Establishment of a Bachelor of Computer
Engineering

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: The Department of Electrical and Computer Engineering is proposing: (1) the closure of the Computer Engineering Option in the current Bachelor of Electrical Engineering, and (2) the establishment of a program of study leading to the Bachelor of Computer Engineering (CIP 14.0901).

Review and Consultation: Faculty in the Department of Electrical and Computer Engineering are proposing the closure of the current Computer Engineering Option offered within the existing Bachelor of Electrical Engineering and the subsequent creation of a Bachelor of Computer Engineering degree. The proposed degree will continue to offer students a foundation for advanced knowledge in software programming, including database management, computer networks, and operating systems, as well as web languages and software development. Students will be prepared for careers as software professionals in industrial, scientific, technical and educational fields.

The proposed closure of the existing option and the establishment of a freestanding Bachelor of Computer Engineering will allow the department to remain competitive with peer institutions. Projected enrollment for the program is approximately 25 students annually, with anticipated growth within the first five years. No additional resources, faculty, or space are required to offer this program.

Recommendation: It is recommended that the Board approve the proposed closure of the Computer Engineering Option in the Bachelor of Electrical Engineering and the establishment of a Bachelor of Computer Engineering. The proposed option closure and degree program were reviewed and approved by Auburn University's Curriculum Committee in Spring 2017, and have been approved by the Samuel Ginn College of Engineering and the Provost's Office. If approved by the Auburn University Board of Trustees, the proposed option closure and degree program will be forwarded to the Alabama Commission on Higher Education for review and approval.




SAMUEL GINN COLLEGE OF ENGINEERING


DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

8/14/17

To: **Dr. Timothy Boosinger**
Provost and Vice-President for Academic Affairs

Through: **Dr. Constance Relihan**
Associate Provost for Undergraduate Studies

Through: **Dr. Christopher Roberts**
Dean, Samuel Ginn College of Engineering 

From: **Dr. R. Mark Nelms** 
Chair, Department of Electrical and Computer Engineering

Subject: Bachelor of Computer Engineering Degree Program

We request the following proposal be added to the Board of Trustee's agenda for their September 15, 2017 meeting.

Proposal: The Department of Electrical and Computer Engineering within the Samuel Ginn College of Engineering presently offers the Bachelor of Electrical Engineering degree. An option for this degree is the Bachelor of Electrical Engineering: Computer Engineering Option. We propose closing this option and replacing it with the Bachelor of Computer Engineering degree program. The proposed program will be separate and distinct from the ongoing Bachelor of Electrical Engineering degree program. It will have the same degree requirements, program objectives, and student outcomes as the current Computer Engineering Option, and will not require additional resources to implement. The proposed program will require a new CIP Code 14.0901, within the Department of Electrical and Computer Engineering.

Justification for Request: The proposed Bachelor of Computer Engineering degree would increase the profile of our computer engineering program to both students and employers. The change indicates an elevated level of importance of the computer engineering discipline over the current computer engineering option. Computer Engineering has evolved into a discipline in its own right, as opposed to a sub discipline of electrical engineering. Therefore, having the Bachelor of Computer Engineering degree would help our graduates acquire jobs classified as requiring "computer engineers". A motivation for the revision is that almost all electrical and computer engineering departments have bachelor of computer engineering programs and the change would make our program consistent with those offered by peer institutions. An additional motivation for separating the two degrees is to allow students to earn a dual degree in electrical engineering and computer engineering. Presently, a number of students opt for a double major in electrical engineering and electrical engineering: computer engineering option. Finally, the electrical and

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SAMUEL GINN COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

computer engineering department faculty unanimously support the revision, as does the department's Industrial Advisory Board.

Employment Opportunities: There is increasing demand for computer engineers to meet the needs in this rapidly growing field. Over the past 5 years, the department has averaged 25 students per year graduating with the computer engineering option. Typically our students with the computer engineering option obtain starting salaries higher than our students with the standard electrical engineering degree.

Recommendation: We recommend closure of the current Bachelor of Electrical Engineering: Computer Engineering Option concurrently with approval of the Bachelor of Computer Engineering program. Please forward this recommendation to the Board of Trustees and the Alabama Commission on Higher Education for review and approval.

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www.eng.auburn.edu/department/ece

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED MASTER OF SCIENCE IN CYBERSECURITY ENGINEERING

WHEREAS, the Samuel Ginn College of Engineering currently offers academic programs that prepare students for professional careers in the fields of software engineering and information technology; and

WHEREAS, the department proposes a new degree program, the Master of Science in Cybersecurity Engineering, that will provide students with the knowledge and skills necessary for professional careers in the detection and prevention of cyberattacks; and

WHEREAS, the proposed degree will provide a unique curriculum that emphasizes software engineering, forensics, systems operations, and computer science disciplines necessary for protecting cyber infrastructures and assets; and

WHEREAS, the proposed degree addresses a national demand for professionals with extensive knowledge in cybersecurity and in protecting and defending infrastructures and cyber networks; and

WHEREAS, the proposed degree program will utilize existing faculty and courses and will not require any additional resources or space; and

WHEREAS, the request to create this degree has been endorsed by the Dean of the Samuel Ginn College of Engineering, the Graduate Council, the Provost, and the President.

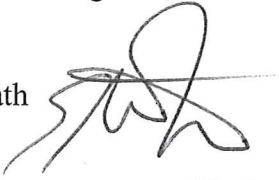
NOW, THEREFORE, BE IT RESOLVED by Auburn University's Board of Trustees that the proposed Master of Science in Cybersecurity Engineering be approved and submitted to the Alabama Commission on Higher Education for review and approval.




AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 5, 2017

MEMORANDUM TO: Steven Leath
President 

FROM: Timothy R. Boosinger 
Provost and Vice President for Academic Affairs

SUBJECT: Agenda Item for the Board of Trustees –
Proposed Master of Science in Cybersecurity Engineering

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: The Department of Computer Science and Software Engineering is proposing the addition of a program of study leading to the Master of Science in Cybersecurity Engineering (CIP 11.1003).

Review and Consultation: Faculty in the Department of Computer Science and Software Engineering are proposing the establishment of a new graduate degree program leading to the Master of Science in Cybersecurity Engineering. Designed for students with an interest in the detection and prevention of cyberattacks, the degree provides a unique curriculum that emphasizes software engineering, forensics, systems operations, and computer science disciplines necessary for protecting cyber infrastructures and assets.

The proposed degree addresses the national demand for professionals in the cybersecurity field due to increasing and persistent cyber threats and attacks. Students completing the degree program will be prepared for professional careers in cybersecurity that involve protecting and defending infrastructures and networks. The department predicts an annual enrollment of 20 students. No additional resources, faculty, or space are required to offer this program.

Recommendation: It is recommended that the Board approve the proposed Master of Science in Cybersecurity Engineering. The proposed degree was reviewed and approved by Auburn University's Graduate Council in Spring 2017, and has been approved by the Samuel Ginn College of Engineering and the Provost's Office. If approved by the Auburn University Board of Trustees, the proposed degree will be forwarded to the Alabama Commission on Higher Education for review and approval.



AUBURN UNIVERSITY
SAMUEL GINN COLLEGE OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND SOFTWARE ENGINEERING

TO: Dr. Timothy Boosinger
Provost & Vice President for Academic Affairs

THROUGH: Dr. George Flowers *George T. Flowers*
Dean, Graduate School

THROUGH: Dr. Christopher Roberts
Dean, Samuel Ginn College of Engineering *Chris Roberts*

FROM: Dr. N. Hari Narayanan *N. Hari Narayanan*
Chair, Department of Computer Science and Software Engineering

DATE: 17 July 2017

SUBJECT: Proposed Master of Science in Cybersecurity Engineering

We request the following proposal be added to the Board of Trustees' agenda for their September 15, 2017 meeting.

Program Purpose and Description: The program prepares students with advanced education in analyzing, developing, investigating, protecting, and defending computer information systems. The Master of Science in Cybersecurity Engineering degree focuses on the engineering and technical aspects of cybersecurity. The degree consists of 33 semester credit hours of graduate study and is designed to appeal to practitioners as well as research scholars.

Justification for Request: Government and industry designate the cybersecurity profession as being in critically short supply. Demand for an educated labor force is accelerating faster than can be accommodated by traditional workforce development programs. Training programs are being used as a stop-gap measure, but these programs are designed to convey specific skills and are not able to equip professionals with fundamental principles which engender broad, abstract, and systemic reasoning expertise and problem solving skills. Government and industry are thus turning to higher education to provide cybersecurity problem solvers. Typical degrees -- computer science, software engineering, computer engineering, information systems, etc. -- do not provide a sufficient focus on cybersecurity. Such a focus requires a specialized degree consisting of a course of study that is tailored to address issues that are unique to protecting the information infrastructure.

State Need: The demand for cybersecurity professionals far exceeds the State's capacity to educate them.

Employment Opportunities: Security breaches in high-profile organizations (Home Depot, Target, JP Morgan, Office of Personnel Management, Democratic National Committee, and Auburn University itself) have brought cybersecurity to the forefront of the news. With industry poised to spend an estimated \$1 trillion on combatting cybercrime, demand for skilled professionals is high. The Federal Bureau of Labor Statistics projects a 18% job growth over the next 10 years, citing information security as growing "much faster than the average for all occupations." Industry

observers estimate a much higher growth, suggesting that global workforce shortages could reach 1.5 million by 2019.

Student Demand - Enrollment Projections: Demand for advanced cybersecurity education is so intense that we feel we will need to cap our yearly intake of students at 20 per year to avoid overextending our teaching and research resources.

Resource Requirements: All courses and instructors necessary for offering the program are in place.

Recommendation: We recommend that the proposed Master of Science in Cybersecurity Engineering be approved by the Offices of the Provost and the President, and that it be forwarded to the Board of Trustees and the Alabama Commission on Higher Education for review and approval.

Auburn University
Department of Computer Science and Software Engineering

Master of Cybersecurity Engineering

Required Foundation Courses

COMP7270/7276 Advanced Algorithms
COMP7300/7306 Advanced Computer Architecture
COMP7500/7506 Advanced Operating System

	Credit Hours
	3
	3
	3
Total	9

Required Cybersecurity-Specific Courses

COMP6350/6356 Digital Forensics
COMP6370/6376 Computer and Network Security
COMP7370/7376 Advanced Computer and Network Security

	3
	3
	3
Total	9

Elective Cybersecurity-Specific Courses

Select at least three from the following:

MATH6180 Cryptography
COMP6520/6526 Network and Operating System Administration
COMP6700/6706 Software Process
COMP6720/6726 Real Time and Embedded Systems
COMP7700/7706 Software Architecture
COMP7710/7716 Software Environments
COMP7720/7726 Software Re-Engineering

	3
	3
	3
	3
	3
	3
	3
Total	9

Elective Courses

6000/7000/8000-level coursework relevant to cybersecurity and approved by the major professor.

	3
Total	3

Required Capstone Project Course

COMP7980/7976 Capstone Engineering Project

	3
Total	3

Total Hours 33

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED MASTER OF ENGINEERING

WHEREAS, the Samuel Ginn College of Engineering currently offers graduate programs leading to degrees in many engineering fields; and

WHEREAS, the college proposes a new graduate degree program, the Master of Engineering, that will provide students with a graduate program to advance their knowledge and skills across a range of specialized engineering fields through completion of advanced technical courses, experiential learning, and research projects; and

WHEREAS, the proposed degree will allow students to utilize existing on-campus and distance learning courses to create unique programs of study that support their professional career goals; and

WHEREAS, the proposed the Master of Engineering will be the first of its kind offered to students in the State of Alabama and will not require any additional resources or space; and

WHEREAS, the request to create this degree has been endorsed by the Dean of the Samuel Ginn College of Engineering, the Graduate Council, the Provost, and the President.

NOW, THEREFORE, BE IT RESOLVED by Auburn University's Board of Trustees that the proposed Master of Engineering be approved and submitted to the Alabama Commission on Higher Education for review and approval.



AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 5, 2017

MEMORANDUM TO: Steven Leath
President

FROM: Timothy R. Boosinger
Provost and Vice President for Academic Affairs

SUBJECT: Agenda Item for the Board of Trustees – Proposed Master of Engineering

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: The Samuel Ginn College of Engineering is proposing the addition of a program of study leading to the Master of Engineering (CIP 14.0101).

Review and Consultation: Faculty in the College are proposing the establishment of a new graduate degree, the Master of Engineering, that allows students to advance their knowledge and skills across a range of specialized engineering fields through completion of advanced technical courses, experiential learning, and research projects. Utilizing existing courses, students will be able to design a unique program of study that addresses their professional career goals and academic needs.

Enrollment in the proposed degree is estimated to be 8-10 students during the inaugural year, with enrollment projected to be more than 50 students after the first five years. The proposed general graduate degree will be the first offered to students in Alabama, and no additional resources, faculty, or space are required.

Recommendation: It is recommended that the Board approve the proposed Master of Science in Engineering. The proposed degree was reviewed and approved by Auburn University's Graduate Council in Spring 2017, and has been approved by the Samuel Ginn College of Engineering and the Provost's Office. If approved by the Auburn University Board of Trustees, the proposed degree will be forwarded to the Alabama Commission on Higher Education for review and approval.



SAMUEL GINN COLLEGE OF ENGINEERING

OFFICE OF THE DEAN

11 August 2017

MEMORANDUM

To: Dr. Timothy Boosinger, Provost & Vice President for Academic Affairs

Through: Dr. George Flowers, Dean of the Graduate School & Chair of the Graduate Council

George T. Flowers
[Signature]

From: Dr. Christopher Roberts, Dean, Samuel Ginn College of Engineering

Subject: Proposed Master of Engineering

We request that the following proposal be added to the Board of Trustees' agenda for their September 15, 2017 meeting.

Program Purpose and Description: The purpose of the Master of Engineering degree is to provide a framework in which practicing engineering professionals can obtain education on knowledge and skills needed to do their jobs and to expand their employment opportunities.

Justification for Request: Practicing engineers will typically have a bachelor's degree in a particular type of engineering. When they enter the workforce, they may find that they need additional skills or knowledge to perform their job. Sometimes this may be more in-depth courses in their own discipline, but quite often they need to learn knowledge or skills in another discipline. However, they often do not need the amount of coursework in a single discipline that is generally required in an M.S. degree in engineering. This interdisciplinary master of engineering degree will allow students to design a program that addresses their particular needs.

Note that the College of Engineering recently received approval from the Board of Trustees to change some of the discipline-specific master of engineering degrees to non-thesis M.S. degrees to better align with the degree designations commonly used in those particular disciplines. Because this proposed degree is interdisciplinary and targets a different student demographic, the Master of Engineering is a more appropriate designation.

State Need: There are no other general engineering master's degrees without a required specialization offered in the state of Alabama. UAH and UAB have programs named master of engineering, but those programs require specialization from a list defined by the program.

Employment Opportunities: The degree could be applied to a wide variety of different situations in which an engineer needs to develop skills for new responsibilities or new technologies. Some specific examples are listed in the program proposal.

Shelby Center For Engineering

Technology

Suite 1301

Auburn, AL 36849-5330

Telephone:

334-844-2308

Fax:

334-844-4487

Student Demand – Enrollment Projections: We expect to enroll about 8-10 students in the first year and for the annual intake of students to double in the first 5 years. Assuming that students take approximately 3 years to complete the degree, since most will be working full time, the total enrollment will be approximately 50 students after 5 years.

Resource Requirements: Course and instructors necessary for offering the program are already in place.

Recommendation: We recommend that the proposed Master of Engineering program be approved by the Offices of the Provost and the President and be forwarded to the Board of Trustees and the Alabama Commission on Higher Education for review and approval.

Master of Engineering - Example Plans of Study

The plans of study for the master of engineering are developed individually by each student. The following are some examples to illustrate the objective of the degree program.

SITUATION 1	
Aerospace engineer moving into lightweight materials for high speed aircraft	
OUTCOMES	
<ul style="list-style-type: none"> • Demonstrate proficiency in the aerodynamics at high velocity • Develop the ability to select materials for reducing structure mass while maintaining performance 	
COURSES	Cr. Hrs.
AERO 6630/6636 AEROSPACE APPLICATIONS OF COMPOSITE MATERIALS	3
AERO 6410/6416 AEROACOUSTICS	3
AERO 7100/7106 ADVANCED SUPERSONIC AERODYNAMICS	3
AERO 7110/7116 AIRFOIL AERODYNAMICS	3
AERO 7210/7216 FLIGHT DYNAMICS OF HYPERVELOCITY VEHICLES	4
MATL 6200/6206 CRYSTALLOGRAPHY	2
MATL 6600/6606 CORROSION	3
PFEN 6250 ADVANCED ENGINEERING FIBROUS STRUCTURES	3
PFEN 7500 MECHANICS OF TEXTILE REINFORCED MATERIALS	3
MECH 6110/6116 INTERMEDIATE HEAT TRANSFER	3
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SITUATION 2	
Industrial engineer moving into a managing a materials processing plant	
OUTCOMES	
<ul style="list-style-type: none"> • Demonstrate proficiency in quality control of a manufacturing process • Develop an understanding of the structure-property-processing relationships in materials 	
COURSES	Cr. Hrs.
INSY 6600/6606 MANUFACTURING AND PRODUCTION ECONOMICS	3
INSY 6800/6806 LEAN PRODUCTION	3
INSY 6840/6846 CONTROL OF THE MANUFACTURING FLOOR AND PROCESSES	3
INSY 6330/6336 DATA BASED DECISION MAKING USING SIX SIGMA	3
INSY 7380/7386 RELIABILITY ENGINEERING	3
MECH 6970/6976 INTERMEDIATE SPECIAL TOPICS IN MECHANICAL ENGINEERING - ADDITIVE MANUFACTURING OF METALS	3
MATL 6100/6106 THERMODYNAMICS OF MATERIALS SYSTEMS	3
MATL 6300/6306 PHASE TRANSFORMATIONS IN MATERIAL PROCESSING	3
MATL 6500/6506 NUMERICAL SIMULATION OF MATERIALS PROCESSING	3
SCMN 7600/7606 SUPPLY MNGT AND MANUFACTURING	3
	30

SITUATION 3	
Mechanical engineer moving into designing small devices	
OUTCOMES	
<ul style="list-style-type: none"> • Demonstrate proficiency in the mechanical design of microelectronic devices • Develop an understanding of transduction mechanisms for sensors 	
COURSES	Cr. Hrs.
MECH 6210/6216 ELECTRONICS THERMAL MANAGEMENT	3
MECH 6310/6316 MECHANICS OF ELECTRONIC PACKAGING	3
MECH 7240/7246 NUMERICAL METHODS IN HEAT TRANSFER	3
MECH 6430/6436 BASICS OF SENSOR APPLICATIONS	3
ELEC 6760/6766 SOLID STATE SENSORS	3
ELEC 6820/6826 MEMS TECHNOLOGY	3
MATL 7410/7416 CHEMICAL SENSORS	3
MATL 7610/7616 ENGINEERING ASPECTS OF BIOLOGICAL AND CHEMICAL DETECTION	3
INSY 6850/6856 ELECTRONICS MANUFACTURING SYSTEMS	3
INSY 7380/7386 RELIABILITY ENGINEERING	3
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SITUATION 4	
Electrical engineer moving into implantable biomedical devices	
OUTCOMES	
<ul style="list-style-type: none"> • Demonstrate proficiency in the mechanical design of biomedical devices • Develop an understanding of the behavior of materials in biological systems 	
COURSES	Cr. Hrs.
ELEC 6106 WIRELESS COMMUNICATION SYSTEMS	3
ELEC 6130/6136 RF DEVICES AND CIRCUITS	3
ELEC 6270/6276 LOW-POWER DESIGN OF ELECTRONIC CIRCUITS	3
ELEC 6310/6316 DESIGN OF ANTENNAS AND ANTENNA SYSTEMS	3
ELEC 6360/6366 BIOMEDICAL APPLICATIONS OF ELECTROMAGNETICS	3
CHEN 6820/6826 ADVANCED TOPICS IN ENVIRONMENTAL BIOTECHNOLOGY	3
MATL 6700/6706 BIOMATERIALS	3
MATL 6720/6726 BIOMEDICAL APPLICATIONS OF POLYMERIC MATERIALS	3
MATL 6750/6756 MICROSTRUCTURE AND MECHANICS OF SKELETAL TISSUES	3
PFEN 6706 BIOMEDICAL APPLICATIONS OF POLYMERIC MATERIALS	3
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SITUATION 5	
Chemical engineer who is moving into management of a biofuels processing plant	
OUTCOMES	
<ul style="list-style-type: none"> • Demonstrate proficiency in the processing of biofuels • Develop an understanding of supply chain management and lean production 	
COURSES	Cr. Hrs.
CHEN 6800/6806 BIOCHEMICAL ENGINEERING	3
CHEN 6670/6676 POLLUTION PREVENTION ENGINEERING	3
CHEN 6820/6826 ADVANCED TOPICS IN ENVIRONMENTAL BIOTECHNOLOGY	3
CHEN 6430/6436 BUSINESS ASPECTS OF CHEMICAL ENGINEERING	3
BSEN 6260 RENEWABLE ENERGY IN BIOSYSTEMS PROCESS OPERATIONS	3
BSEN 6540 BIOMASS AND BIOFUELS ENGINEERING	3
INSY 6600/6606 MANUFACTURING AND PRODUCTION ECONOMICS	3
INSY 6800/6806 LEAN PRODUCTION	3
SCMN 7600/7606 SUPPLY MNGT AND MANUFACTURING	3
SCMN 7800/7806 SUPPLY CHAIN STRATEGY	3
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SITUATION 6	
Increased responsibility for web presence and information security	
OUTCOMES	
<ul style="list-style-type: none"> • Demonstrate proficiency in the development of web interfaces • Develop an understanding of approaches and strategies for securing critical information 	
COURSES	Cr. Hrs.
COMP 6000/6006 WEB APPLICATION DEVELOPMENT	3
COMP 6010/6016 INTERACTIVE APPLICATIONS IN VISUAL BASIC	3
COMP 6020/6026 ADVANCED WEB APPLICATION DEVELOPMENT	3
ELEC 6110/6116 WIRELESS NETWORKS	3
ELEC 6150/6156 INFORMATION SECURITY	3
ELEC 6410/6416 DIGITAL SIGNAL PROCESSING	3
INSY 7100/7106 ADAPTIVE OPTIMIZATION	3
ISMN 6280/6286 INFORMATION SYSTEMS ARCHITECTURE IN THE SMALL LAND MEDIUM-SIZE ENTERPRISE	3
ISMN 6380/6386 SOCIAL MEDIA AS A TOOL FOR BUSINESS STRATEGY	3
ISMN 6670/6676 SECURITY AND INFORMATION ASSURANCE	3
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ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED DOCTOR OF PHILOSOPHY IN EARTH SYSTEM SCIENCE

WHEREAS, the Department of Geosciences currently offers academic programs that prepare students for advanced study and professional careers in the fields of Geology, Geography and Geosciences; and

WHEREAS, the department proposes a new degree program, the Doctor of Philosophy in Earth System Science, that will provide students with advanced knowledge and skills necessary for developing solutions to diverse climate and environmental problems; and

WHEREAS, the proposed degree will provide students with a curriculum that emphasizes that interdisciplinary knowledge across the physical, biological, environmental, and socio-economic disciplines; and

WHEREAS, the proposed degree will provide advanced research and study necessary to address the impact of climate change, sustainability, environmental conservation, and food systems on the earth's natural resources; and

WHEREAS, the proposed degree addresses a national demand for professionals and geoscientists able to work in diverse fields involving geosciences, informatics, geography, and geographic information systems; and

WHEREAS, the proposed degree program will utilize existing faculty and courses and will not require any additional resources or space; and

WHEREAS, the request to create this degree has been endorsed by the Dean of the College of Sciences and Mathematics, the Graduate Council, the Provost, and the President.

NOW, THEREFORE, BE IT RESOLVED by Auburn University's Board of Trustees that the proposed Doctor of Philosophy in Earth System Science be approved and submitted to the Alabama Commission on Higher Education for review and approval.



AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 5, 2017

MEMORANDUM TO:

Steven Leath
President

FROM:

Timothy R. Boosinger 
Provost and Vice President for Academic Affairs

SUBJECT:

Agenda Item for the Board of Trustees – Proposed PhD in Earth System Science

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: The Department of Geosciences is proposing the addition of a program of study leading to the Doctor of Philosophy in Earth System Science (CIP 40.0699).

Review and Consultation: Faculty in the Department of Geosciences are proposing the establishment of a new graduate degree, the PhD in Earth System Science, for students interested in advancing research and developing solutions to address diverse climate and environmental problems that require interdisciplinary knowledge across the physical, biological, environmental, and socio-economic disciplines.

Led by 45 faculty experts representing diverse fields of study, students will examine the impact on issues of climate change, sustainability, environmental conservation, and food systems on the earth's natural resources. With a foundation in traditional disciplines and a strong understanding of environmental issues, students will be prepared for professional careers as scientists in a wide range of fields involving geosciences, informatics, geography, and geographic information systems, or with federal agencies in the public sector or private industries. Projected enrollment of the program is approximately five-10 students, and no additional resources, faculty, or space are required.

Recommendation: It is recommended that the Board approve the proposed PhD in Earth System Science. The proposed degree was reviewed and approved by Auburn University's Graduate Council in Spring 2017, and has been approved by the College of Sciences and Mathematics and the Provost's Office. If approved by the Auburn University Board of Trustees, the proposed degree will be forwarded to the Alabama Commission on Higher Education for review and approval.



COLLEGE OF SCIENCES AND MATHEMATICS
DEPARTMENT OF GEOSCIENCES

To: Timothy Boosinger
Provost & Vice President for Academic Affairs

Through: George Flowers *George T. Flowers*
Dean of Graduate School

Through: Nicholas Giordano *Nicholas Giordano*
Dean of College of Sciences and Mathematics

From: Mark Steltenpohl *Mark Steltenpohl*
Chair, Department of Geosciences

Date: July 6, 2017

Subject: Proposed PhD Degree Program in Earth System Science (ESS)

We request that the following proposal be added to the Board of Trustee's agenda for their September meeting in 2017.

Program Purpose and Description: The program will train the next-generation professionals for employment opportunities in the areas of Earth and Environmental Sciences with applications to food, energy, and water security of natural resources.

Justification for Request: Earth's systems play fundamental roles in shaping natural ecosystems and the human economies and cultures that depend on them. Our environment and climate are changing, with disruptive impacts on sustainable supplies of food, energy, and water. Scientists project that trends of rapid environmental changes will continue and in some cases accelerate, posing significant risks to human health, forests, agriculture, clean freshwater supplies, coastlines, and other natural resources that are vital to State of Alabama's economy, environment, and our quality of life. Because so much is tied to the Earth system, a change in one system can affect many other systems, negatively impacting where and how people, plants and animals live, the production of food, the availability and usefulness of water, and other compounded health risks. Our state and societies around the globe need to avoid worsening climate and environmental impacts and reduce the risk of creating changes beyond our ability to respond and adapt. The proposed new PhD program is designed to educate the next generation of scientists to gain an understanding of the Earth system and socio-economic variables that affect sustainable food, energy, water, and mineral supplies. Students will be engaged in all aspects of research and mentored by a strong cross-disciplinary group of more than 45 AU faculty members spanning multiple STEM and social science units across campus, including new faculty hires from the CHESS (Coupled Human-Natural systems and Earth Systems Science) cluster initiative. This new PhD program will provide long-term sustainability of inter-disciplinary research and training beyond what any single-discipline program can offer.

State Need: No other four-year institutions in the state of Alabama offer a comprehensive interdisciplinary program in Earth System Science at the PhD level.

GEOSCIENCES

2050 BEARD EAVES COLISEUM

AUBURN, AL 36849-5418

PHONE: 334-844-4282

FAX: 334-844-4486

www.auburn.edu

Employment Opportunities: The program will prepare students to 1) teach Earth and environmental science at the university and college level, or 2) become professionals in the natural resources and environmental industries. Demands for employees in most science fields tend to be cyclical. Overall, according to the Bureau of Labor Statistics, there were a total of 296,963 geoscience jobs in 2012, and this number is expected to increase by 14% by 2022 to a total of 339,737 jobs (Status of Geoscience Workforce, AGI 2014). Moreover, approximately 143,000 geoscientists are expected to retire by 2022, but over the next decade, only 51,000 students will be graduating with their bachelor's, master's, or doctoral degrees in the geosciences. Therefore, assuming minimal non-retirement attrition from the geoscience workforce, there is expected to be a deficit of approximately 135,000 geoscientists by 2022. The total employment opportunities for related ESS fields (e.g., environmental sciences, environmental engineering, forestry, atmospheric science, etc.) are also expected to increase in the next decade, since a relatively large percentage of the workforce (40-65%) is close to retirement. Regionally, environmental engineering and related jobs are expected to grow by 28.6 percent (1050 to 1,350) from 2012 to 2022 (<http://www.wrksolutions.com/for-individuals/career-exploration/environmental-engineering>).

Student Demand – Enrollment Projections: The percentage of federal funding for Earth and environmental sciences has continued to increase since 2010, mirroring when Earth and environmental science became the primary ESS-related field receiving the highest amount of federal funding due to accelerating emphasis on applied research. This trend is expected to continue into 2020 and beyond. Due to the excellent employment and research opportunities for ESS fields, we expect the degree program will have an enrollment of 5-10 PhD students per year in the first 5 years. Student enrollment is expected to increase since most established ESS PhD programs in US universities (e.g., Stanford and University of New Hampshire) are the largest graduate programs in their colleges in terms of student enrollment.

Resource Requirements: All courses, faculty (including seven new CHESS cluster hires), spaces, and research facilities necessary for offering the program are already in place.

Recommendation: We recommend that the proposed PhD in Earth System Science be approved by the Offices of the Provost and the President and be forwarded to the Board of Trustees and the Alabama Commission on Higher Education for review and approval.

Interdisciplinary Earth System Science PhD Program Requirements:

The formal requirements for the PhD degree are the same as outlined in graduate school web page: <http://bulletin.auburn.edu/thegraduateschool/doctordaldegrees/>. This PhD program, due to its interdisciplinary nature, has specific course requirements as below.

Course Requirements: The interdisciplinary PhD degree, without previous graduate course work, requires successful completion of a minimum of 60 semester credit hours at the graduate level (6000-8000 level). The total 60 hours must include: 1) 7 hours of required core courses across earth system science disciplines, 2) a minimum of 10 hours of dissertation credit, and 3) additional elective course work to develop an academic focus with the approval of the faculty adviser and dissertation committee. We list below recommended elective courses for students interested in a particular career path. The maximum number of directed-study credits that may be applied toward the degree is three (3) units. The total number of credit hours of previous graduate course or thesis work may be transferred toward the PhD degree must be less than 50 percent of the credit hours listed on the Plan of Study. A maximum of four hours of Master thesis credit may be transferred and counted toward PhD course requirement. Required core courses (7 hours) include:

- 1) Earth System Science and Global Change (3 hours)
- 2) Earth System Observation and Analysis (3 hours)
- 3) Earth System Science Seminar (1 hour)

Summary of Program Course Completion Requirements:

Credit hours required in major courses (core courses PhD)	7
Credit hours in required or free electives	43
Credit hours for thesis or dissertation	10
Total credit hours required for completion	60

Existing Courses and New Courses Required and/or Available for the Program:

Course Number and Title: <u>Required</u>	Number of Credit Hours	* If New Course
ESSI 8000 Earth System Science and Global Change	3	*
ESSI 8100 Earth System Observation and Analysis	3	*
ESSI 8200 Earth System Science Seminar	1	*

ESSI 8990 PhD Dissertation	10	*
Course Number and Title: <u>Recommended Elective</u>	Number of Credit Hours	* If New Course
GEOL 8900/ESSI8900 Directed Studies	3	*
GEOL 6440 Electron Microprobe Analysis	3	*
GEOL 6600 Applied Geophysics	3	
GEOL 7170 Impact and Planetary Geology	3	*
GEOL 7200 Tectonics	3	
GEOL 7250 Groundwater Hydrogeologic Modeling	3	
GEOL 7260 Aqueous and Environmental Geochemistry	3	
GEOL 7280 Climate Change Literacy and Communication	3	*
GEOL 7300 Cycles through Earth History	3	
GEOL 7400 Advanced Economic Geology	3	
GEOL 7450 Mineral Resources and Environment	3	
GEOL 7500 Paleoclimatology	3	*
GEOL 7550 Advanced Geophysics	3	
GEOL 7600 Petrology	3	
GEOL 7610 Structure and Metamorphic Analysis	3	
GEOL 7650 Facies Analysis and Sequence Stratigraphy	3	
GEOL 7700 Analytical and Isotope Geochemistry	3	*
GEOG 6010 Urban Geography and Sustainability	3	
GEOG 6210 Climatology	3	
GEOG 6220 Geomorphology	3	
GEOG 6350 Quantitative Methods and Spatial Analysis	3	
GEOG 6600 Global Resources and the Environment	3	
GEOG 6850 Geographic Information System Applications	3	
GEOG 6870 Advanced Remote Sensing	3	
STAT 7000 Experimental Statistics I	4	
STAT 7020 Regression Analysis	3	
STAT 7670 Applied Longitudinal Data Analysis	3	
STAT 7840 Applied Multivariate Statistical Analysis	3	
STAT 7860 Applied Time Series Analysis	3	
BIOL 6090 Conservation Biology	3	

BIOL 6150 Community Ecology	3	
BIOL 6510 Biogeography	3	
BIOL 7075 Introduction to Oceanography	3	*
BIOL 7370 Stream Ecology	4	
BIOL 7380 Ecology & Management of Riverine Systems	4	
BIOL 7705 Tropical Biology: Ecological Approach	8	
BIOL/STAT 7970 Quantitative Methods for Biological Data	4	
ANTH 6970 Political Ecology	3	
ECON 8540 Seminar in Environmental Economics	3	
RSOC 7630 Political Economy of Development	3	
CSES 6000 Soils and Environmental Quality	3	
CSES 6020 Nutrient Management	3	
CSES 6060 Soil Microbiology	3	
CSES 6061 Soil Microbiology Lab	1	
CSES 6080 Soil Resources and Conservation	4	
CSES 6300 Soil Chemistry	4	
CSES 6590 Environmental Soil Physics	4	
CSES 6150 Soil Morphology	4	
CSES 7080 Experimental Methods	3	
CESE/ENVI 7600 Agroclimatology	3	*
BSEN 6220 Geospatial Technologies in Biosystems	3	
BSEN 6250 Deterministic Modeling	3	
BSEN 6260 Renewable Energy in Biosystems Process Operations	3	
BSEN 6510 Ecological Engineering	3	
BSEN 6520 Watershed Modeling	3	
BSEN 6540 Biomass and Biofuels	3	

FISH 5725/6725 Marine Ichthyology	6	
FISH 6320/6321 Limnology/Limnology Lab	4	
FISH 7530 Fish Population Dynamics	3	
FISH 7340 Fish Ecology	3	
FISH 7540 Quantitative Techniques in Fishery Assessment	3	
FISH 7650 Traditional Approaches to Fish Genetic Enhancement	2	
FISH 7750 Biotechnological Approaches to Fish Genetics	2	
CIVL 6110 Open Channel Hydraulics	3	
CIVL 6120 Hydrologic Analysis & Modeling	3	
CIVL 7140 Ecohydrology	3	*
CIVL 6150 Groundwater Hydraulics	3	
CIVL 6210 Chemical Principle Of Enviro Engineering	3	
CIVL 6240 Air Pollution	3	
CIVL 6250 Biological Principal of Environmental Engineering	3	
CIVL 6970 Urban Hydraulic System Design	3	
CIVL 7170 Numeric Methods for Hydraulics and Hydrology	3	
CIVL 7210 Methods Of Pollution Analysis	3	
CIVL 7220 Wastewater Ops Proc I	3	
CIVL 7230 Wastewater Ops Proc II	3	
CIVL 7280/7286 Surface Water Quality Modeling	3	
CIVL 7970 Numerical Modeling of Free Surface Flows	3	
CIVL 7970 Environmental Fluid Dynamics	3	
CIVL/ESSI 7970 Social-Ecological Systems	3	*
COMP 6120 Database Systems I	3	
COMP 7120 Database Systems II	3	

FOR Y 6470 GIS Applications in Natural Resources	2	
FOR Y 6480 GIS Database Design And Analysis	2	
FOR Y 6250 Wetland Ecology and Management	3	
FOR Y 7110 Forest Biogeochemistry	3	
FOR Y 7160 Ecosystem Responses to Chemical Climate Change	3	
FOR Y 7210 Ecosystem Ecology	3	
FOR Y 7250 Advanced Ecosystem Modeling	3	
FOR Y 7550 Watershed Hydrology	3	
FOWS 6050 Urban Ecology	3	
FOWS 6220 Landscape Ecology	3	
FOWS 6320 Environmental Services	3	
FOWS 6880 Ecological Economics	3	
FOWS 7150 Spatial Statistics for Natural Resources	3	
WILD 7100 Applied Ecological Modeling	2	
WILD 7150 Advanced Analysis for Ecological Sciences	4	
GSEI/ESSI 6200 Land Processes and Climate Interactions	3	*
GSEI/ESSI 6500 Digital Earth and Big Data	3	*
GSEI/ESSI 6600 Climate Modeling	3	*
ERMA 7200 Basic Methods in Science Education	3	
ERMA 7210 Theory and Methodology of Qualitative Research	3	
ERMA 7300/7306 Design and Analysis in Education I	3	
ERMA 7310 Design and Analysis in Education II	3	
ERMA 8200/8206 Survey Research Methods	3	
CTSE 7510 Research Studies: Science	3	
CTSE 7540 Evaluation of Program: Science	3	

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

PROPOSED CHANGES TO FACULTY PERSONNEL POLICIES

WHEREAS, the faculty personnel policies included in the *Faculty Handbook* reflect Auburn University policies and information; and

WHEREAS, the University Senate has proposed changes that provide additional clarifications regarding the process for faculty seeking promotion to associate professor with tenure; and

WHEREAS, the University Senate has also proposed a provision allowing certain eligible non-tenure track faculty the opportunity to receive emeritus status upon retirement after at least ten years of meritorious service; and

WHEREAS, the proposed changes to the faculty personnel policies have been recommended by the University Senate and have received the approval of the Provost and the President; and

WHEREAS, the Board defines policies related to appointment, promotion, tenure and dismissal of faculty, and the development and approval of procedures to implement those policies is the responsibility of the President or those duly authorized by the President.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that Steven Leath, President, or such other person as may be acting as President, be and the same is hereby authorized to revise the contents of the faculty personnel policies as shown on Attachment A and is delegated the authority to approve procedures for the administration of these policies.

ATTACHMENT A

3.6.5.C.c.e Policy and Procedure for Promotion and Tenure, Information on the Candidate, Information to Be Supplied by the Department Head/Chair

e. Confidential Letters from Outside Reviewers

The department head/chair (or the dean) shall solicit information from outside references in the case of candidates nominated for **associate** or full professor, ~~or~~ librarian **III or IV**, or archivist **III or IV**; ~~he or she may do so in other cases.~~

3.3.4 Academic Ranks and Promotion ‡

Academic rank is accorded to qualified individuals whose primary assignment is to any of the three major functions of the University: teaching, research/creative work, and outreach. The following general considerations apply to appointment or promotion to faculty ranks:

Assistant Professor: Assistant professor is the usual entry-level rank for a candidate who has completed the appropriate terminal degree (usually a doctorate) or has the equivalent in training, ability, and experience. While a terminal degree or the equivalent is required, an appointee is not required to have a minimum number of years in academic service to be eligible for the rank of assistant professor.

Associate Professor: Associate professor is a rank of distinction that is attained through successful performance of assigned duties. A candidate should hold the appropriate terminal degree (usually a doctorate) or the equivalent. Normally, a candidate must serve at least **five** complete years on full-time appointment at the assistant professor level before he or she may be nominated for promotion to associate professor. Prior faculty service at other colleges or universities or prior service in appropriate professional activities may qualify for consideration in meeting the requirement for years in rank for promotion. A candidate who is especially meritorious may be recommended for early promotion by the department head/chair with majority support of the faculty who hold rank superior to that of the candidate.

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Professor: Professor is a rank requiring professional peer recognition of the individual as an authority in his or her field of specialization. A candidate must be recognized by associates as a capable teacher, scholar or artist, or outreach specialist. It is therefore expected that peers within and outside the University will attest to the candidate's high professional standing. A candidate should hold the appropriate terminal degree (usually a doctorate) or the equivalent. Normally, a candidate must serve at least four complete years on full-time appointment at the associate professor level before he or she may be nominated for promotion to professor. Only in exceptional and well-documented cases in which a faculty member has met requirements for promotion to professor in a shorter time should he or she be recommended for early promotion by the department head/chair, with majority support of the faculty members who hold rank superior to that of the candidate.

A candidate for professor should have demonstrated significant involvement in the teaching, research/creative work, or outreach functions of the University. He or she should also have participated in professional life and have been actively involved in departmental, college or school, and University affairs. For this rank it is essential that the candidate should have demonstrated a marked degree of scholarship appropriate to his or her assignment through work, typically publication or creative endeavor, subjected to peer review. By means of such activity, a candidate for the University's highest academic rank should have a respected national reputation.

3.6.4 Eligibility for Promotion and Tenure ‡

There is no fixed requirement for years of service at a given rank before a faculty member can be promoted or tenured. However, the qualifications for tenure or for promotion to associate professor generally cannot be demonstrated fully in less than five complete years of service; promotion to professor cannot be demonstrated fully in less than four complete years on full-time appointment at the associate professor level. Only in exceptional and well-documented cases, in which a faculty member has met all requirements for promotion and/or tenure in a shorter time, should he or she be recommended for promotion and/or tenure before meeting these standard expectations for completed years in rank.

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The norm for consideration of candidates for tenure and promotion to associate professor is therefore during the sixth year of appointment. A candidate must be considered for tenure during his or her sixth year if he or she has not been granted tenure earlier and has not waived consideration. Under no circumstances should the length of the probationary period exceed seven years of full-time service except where the faculty member has agreed in writing that a year in which the faculty member qualified for leave under the Family and Medical Leave Act (FMLA) or took leave without pay will not count toward the probationary period. The written agreement must be received by the provost within the probationary year in which the extension is requested.

If a faculty member begins employment between January 1 and May 15, the partial academic or calendar year shall not count as part of the probationary period.

A faculty member who feels that he or she has not met the requirements for tenure by the sixth year can forever waive consideration by stating, in writing, that he or she does not wish to be considered by the department. In such a case, the dean will send the letter of noncontinuation to the faculty member.

A faculty member on leave of absence without pay need not count his or her leave time toward tenure and/or promotion. However, if such a leave is professionally related, the faculty member may wish to count that time. Except as otherwise required by law, a faculty member on leave without pay cannot be a candidate for promotion and/or tenure while on leave. A faculty member on leave with pay should count such time and may be a candidate.

A faculty member who has qualified for FMLA leave while holding a tenure-accruing appointment may request a one-year extension of the date on which the probationary period would end. Only two such extensions are allowed. Any request may be made only during the first five probationary years of the tenure process. The faculty member will retain the position of full-time employee.

Except in highly unusual circumstances, a faculty member holding the rank of assistant professor, librarian II, or archivist II recommended for tenure should be recommended for promotion to associate professor, librarian III, or archivist III as well. However, recommendation for promotion at this level does not necessarily entail recommendation for tenure, since the criteria for tenure, which include collegiality, are more exacting than the criteria for promotion. Recommendations for promotion and tenure must be voted separately. There are no fixed quotas for tenured positions or for the various ranks established for colleges, schools, or departments.

3.10.3 Emeritus Status Policy and Procedures ‡

Eligibility: Emeritus status may be awarded on retirement to faculty holding the rank of professor, associate professor, **senior lecturer, lecturer, clinical professor, clinical associate professor**, or their equivalents with ten years or more of sustained meritorious service to Auburn University. Faculty entering into retirement as the result of a disability must meet these eligibility standards, but may be exempt from the ten-year requirement. This honorary title may be awarded posthumously. Faculty holding a titled professorship at the time of retirement may transfer the title to emeritus status. The president may award emeritus status to other university retirees not holding faculty rank but meeting the qualification of ten years or more of sustained meritorious service to Auburn University.

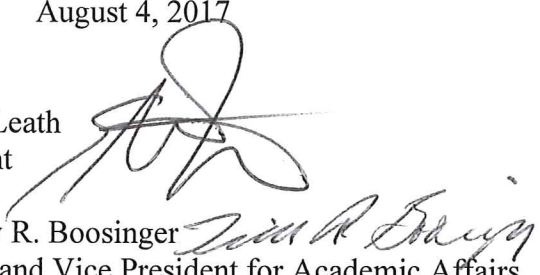


AUBURN UNIVERSITY

OFFICE OF THE PROVOST
AND VICE PRESIDENT FOR
ACADEMIC AFFAIRS

August 4, 2017

MEMORANDUM TO: Steven Leath
President

FROM: Timothy R. Boosinger 
Provost and Vice President for Academic Affairs

SUBJECT: Agenda Item for the Board of Trustees –
Proposed Revisions to Chapter Three of the *Faculty Handbook*

I am writing to request that the following item be added to the Board of Trustees' agenda for the **September 15, 2017** meeting.

Proposal: Early in 2017, the University Senate recommended three changes in faculty personnel policies contained in Chapter Three of the *Auburn University Faculty Handbook*: (1) requiring confidential letters of evaluation from outside reviewers for promotion to the rank of associate professor with tenure; (2) adding an explicit statement that a candidate would normally serve five years at rank before applying for promotion and/or tenure; and (3) establishing a process by which certain eligible non-tenure track faculty members may receive emeritus status upon retirement after at least ten years of meritorious service to Auburn University.

The first of these proposed changes simply codifies Auburn's standard practice. The second aligns our policy with those of peer institutions, without changing Auburn's policy on *de facto* tenure or prohibiting faculty members from applying for tenure or promotion prior to their fifth year. The third affords an opportunity for recognition of meritorious performance to valuable members of the Auburn faculty.

Recommendation: It is recommended that the Board approve the proposed changes to faculty personnel policies published in the *Auburn University Faculty Handbook*.

ACADEMIC AFFAIRS COMMITTEE

RESOLUTION

ESTABLISHMENT OF MANAGERIAL GROUP TO ENABLE AUBURN UNIVERSITY TO CONDUCT SELECTED CLASSIFIED RESEARCH PROGRAMS

WHEREAS, the Board of Trustees acknowledges that Auburn has been conducting classified research since 1971 and that continuation of such research remains important to Auburn University; and

WHEREAS, only universities and contractors who have been granted a facility security clearance and individuals holding appropriate security clearances are permitted access to classified information; and

WHEREAS, in order for Auburn University to continue to conduct classified research it is required by the Department of Defense to establish a Managerial Group charged with the responsibility for the protection of classified information under classified contracts awarded to Auburn University.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of Auburn University that those persons occupying the following positions among the officers of Auburn University, or such other person as may be acting in such positions shall be known as the Managerial Group, having the authority and responsibility for the negotiation, execution, and administration of Department of Defense (DoD) or User Agency contracts, as described in DOD 5220.22-M, "National Industrial Security Program Operating Manual" (NISPOM).

Title:

President
Provost and Vice President for Academic Affairs
Vice President for Research and Economic Development
Associate Provost and Associate Vice President for Research
Associate Vice President for Facilities Management
Executive Director for Office of External Engagement and Support
Executive Director for AU Huntsville Research Center
Senior Counsel for National Security Programs, Cyber Programs, & Military Affairs

BE IT FURTHER RESOLVED that the President and all other members of the Managerial Group have been processed, or will be processed, for a personnel security clearance for access to classified information to the level of the facility security clearance granted to this institution, as provided for in the NISPOM. The said Managerial Group is hereby delegated all of the Board's duties and responsibilities pertaining to the protection of classified information under classified contracts of the DoD or User Agencies of the NISPOM awarded to Auburn University. The following officer positions as well as any members of the Board of Trustees shall not require, shall not have, and can be effectively excluded from, access to all classified information in the possession of Auburn University, and do not occupy positions that would enable them to affect adversely the policies and practices of Auburn University in the performance of classified contracts for the DoD or User

Agencies of the NISPOM awarded to Auburn University, and need not be processed for a personnel security clearance.

Officers:

Executive Vice President (currently Donald L. Large, Jr.)
Associate Provost & Vice President for University Outreach (currently Royrickers Cook)
Associate Provost & Vice President for Student Affairs (currently Bobby R. Woodard)
Vice President for Alumni Affairs (currently Gretchen VanValkenburg)
Vice President for Development (currently Jane DiFolco Parker)
Chancellor, Auburn University at Montgomery (currently Carl A. Stockton)
Director, Alabama Cooperative Extension System (currently Gary D. Lemme)
Director, Alabama Agricultural Experiment Station (currently Paul M. Patterson)
Director of Intercollegiate Athletics (currently Jay Jacobs)
Secretary to the Board of Trustees (currently Grant Davis, Jr.)
General Counsel (currently Lee F. Armstrong)
Executive Director Governmental Affairs (Charles J. Hincy)

Board of Trustees

Title:

President of Board (currently Governor Kay Ivey)
District 1 (currently B.T. Roberts)
District 2 (currently Clark Sahlie)
District 3 (currently James W. Rane)
District 3 – Lee County (currently Bob Dumas)
District 4 (currently Jimmy H. Sanford)
District 5 (currently D. Gaines Lanier)
District 6 (currently Elizabeth Huntley)
District 7 (currently Sarah B. Newton)
District 8/President Pro Tempore (currently Michael A. DeMaioribus)
District 9 (currently James Pratt)
At-Large (currently Wayne T. Smith)
At-Large (currently Raymond J. Harbert)
At-Large (currently Charles D. McCrary)
At-Large (currently Quentin P. Riggins)
At-Large (currently (Ret.) Gen. Lloyd J. Austin)

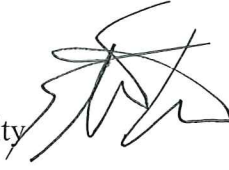



AUBURN UNIVERSITY

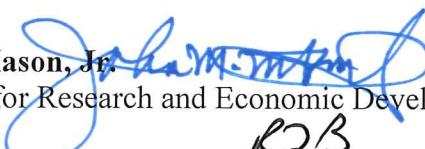
OFFICE OF THE VICE PRESIDENT FOR
RESEARCH AND ECONOMIC DEVELOPMENT

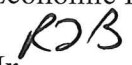
Office of Research Security

July 27, 2017

TO: **Dr. Steven Leath**
President, Auburn University 

THROUGH: **Dr. Timothy R. Boosinger** 
Provost and Vice President for Academic Affairs

THROUGH: **Dr. John M. Mason, Jr.** 
Vice President for Research and Economic Development

FROM: **LTG (Ret) Ronald L. Burgess, Jr.** 
Senior Counsel for National Security Programs, Cyber Programs and
Military Affairs

SUBJECT: Academic Affairs Committee
Revision to Managerial Group Resolution

We are writing to request that the following resolution be presented to the Board of Trustees through the Academic Affairs Committee and included on the agenda for their **September 15, 2017** meeting.

Proposal: The Research Security Office, within the Office of the Vice President for Research and Economic Development, is proposing that two At-Large positions be added to the approved list of positions known as the Managerial Group. This Group is charged with the responsibility for the protection of classified information under classified contracts awarded to Auburn University.

Review and Consultation: The new additions to be added to the Managerial Group are the At-Large positions, and have been approved previously by the Auburn University Board of Trustees.

Recommendation: It is recommended that the By-Laws be revised to reflect the At-Large positions for approval and forwarded to Auburn University's Board of Trustees for review and final approval.



AUBURN UNIVERSITY

OFFICE OF THE VICE PRESIDENT FOR
RESEARCH AND ECONOMIC DEVELOPMENT

Office of Research Security

Executive Summary Statement for the BOT Agenda

Revision to the Managerial Group that Enables Auburn University to Conduct Selected Classified Research Programs (Steven Leath, President)

The Department of Defense 5220.22-M National Industrial Security Program Operating Manual, paragraph 2-106.1 authorizes the Board of Trustees to delegate certain duties and responsibilities related to contracts and grants to a university managerial group. This authority pertaining to the protection of classified* information will be delegated to a managerial group within Auburn University. This resolution is required by Department of Defense regulations.

Request approval to the "Temporary Exclusion Resolution" for Dr. Steven Leath from access to classified information under classified contracts until such time as the appropriate personnel security clearance is issued.

The list of eligible university positions known as the Managerial Group for Auburn University is to be updated by adding the additional two "At-Large" positions. This is the only significant change to the resolution.

Please call me at 4-5962 if you have any questions regarding this request. Thank you so much for your help.

Sincerely,

Georgia White
Manager, Research Security Office

FINANCE COMMITTEE

RESOLUTION

2017-2018 BUDGET

BE IT RESOLVED by the Board of Trustees of Auburn University as follows:

Section 1. The operating budget for Auburn University covering current operating funds and auxiliary funds for the fiscal year beginning October 1, 2017, and ending September 30, 2018, as presented by the President and approved by the Finance Committee of the Board of Trustees, be, and the same is hereby approved.

Section 2. Nothing in said budget shall be accepted or construed to be legal obligations or liabilities against Auburn University. The amounts fixed in the components of the budget for the year 2017-2018 shall be understood to be the relative amounts to be paid or expended for those components in relationship to the funds and/or income of the University available for the support and maintenance of the University

Section 3. The proposed expenditure amounts as set out in the budget are hereby approved and adopted and the President is authorized and empowered to enact such budget on October 1, 2017. The President is further authorized and empowered to effect routine adjustments to this budget as deemed necessary and appropriate.

Section 4. The Finance Committee of the Board of Trustees is requested and authorized to approve material adjustments in this budget as may be determined necessary and presented by the President.

Section 5. In order to manage the University's opportunities to refinance its outstanding General Fee Revenue Bonds and thereby reduce the University's overall debt service obligations as and when possible, the Authorization attached as Exhibit A is hereby approved and adopted as if set forth in full in this resolution.

EXHIBIT A

AUTHORIZATION FOR THE ISSUANCE OF REVENUE REFUNDING BONDS OF AUBURN UNIVERSITY

WHEREAS, it is desirable and appropriate for Auburn University (the “University”) to issue its General Fee Revenue Bonds from time to time for the purpose of refunding and paying certain of its prior outstanding bonds and thereby achieving an overall interest rate expense savings to the University; and

WHEREAS, in order to manage the University’s refunding opportunities in the most efficient manner possible and to permit the University to take advantage of changing market conditions, it is desirable and appropriate to authorize the officers of the University to arrange for the issuance of refunding bonds without further approval of the Board of Trustees, subject to the limitations expressed in this authorization.

THEREFORE, by virtue of the Resolution to which this Authorization is attached, the Board of Trustees hereby and thereby authorizes the following:

Section 1. Findings. The following bonds or leases of the University are currently outstanding:

- (i) General Fee Revenue Bonds, Series 2008, dated September 1, 2008 and not previously refunded, issued under the Thirteenth Supplemental General Fee Indenture dated as of September 1, 2008;
- (ii) General Fee Revenue Bonds, Series 2009, dated December 29, 2009, issued under the Fourteenth Supplemental General Fee Indenture dated as of December 1, 2009;
- (iii) General Fee Revenue Bonds, Series 2011-A, dated May 1, 2011, issued under the Fifteenth Supplemental General Fee Indenture dated as of May 1, 2011;
- (iv) General Fee Revenue Bonds, Series 2012-A and Series 2012-B (Taxable), dated March 27, 2012, issued under the Sixteenth Supplemental General Fee Indenture dated as of March 1, 2012;
- (v) General Fee Revenue Bonds, Series 2014-A, dated July 1, 2014, issued under the Seventeenth Supplemental General Fee Indenture dated as of July 1, 2014;

- (vi) General Fee Revenue Bonds, Series 2015-A, dated March 18, 2015, issued under the Eighteenth Supplemental General Fee Indenture dated as of March 1, 2015;
- (vii) General Fee Revenue Bonds, Series 2015-B, dated September 10, 2015, issued under the Nineteenth Supplemental General Fee Indenture dated as of September 1, 2015;
- (viii) General Fee Revenue Bonds, Series 2016-A, dated August 17, 2016, issued under the Twentieth Supplemental General Fee Indenture dated as of August 1, 2016;
- (ix) Athletic Revenue Bonds, Series 2001-A, dated December 1, 2001; and
- (x) Dormitory Revenue Bonds, Series 1978.
- (xi) Lease Revenue Bonds, Series 2017 (Auburn University Educational Complex Gulf Shores Project)

The bonds described in (i) – (xi) above are herein referred to as the “Outstanding Bonds.”

Section 2. Authorization of Bonds. The University is hereby authorized to issue its revenue bonds for the purpose of refunding any or all of the Outstanding Bonds. The said bonds shall be issued under the terms, conditions and provisions set out in the General Fee Revenue Trust Indenture dated as of June 1, 1985 between the University and The Bank of New York Mellon Trust Company, N.A., as successor trustee (herein called the “Trustee”), as heretofore supplemented, and as further supplemented by the Supplemental General Fee Revenue Indentures (the “Supplemental General Fee Indentures”) provided for in Section 6 of this authorization (the original General Fee Revenue Trust Indenture, as so supplemented being herein referred to as the “General Fee Revenue Indenture”). The bonds herein authorized (the “Bonds”) may be issued at such time or times and in such series as may be most advantageous to the University, subject to the provisions of Section 12 of this authorization. The Outstanding Bonds to be refunded by the Bonds are hereinafter referred to as the “Refunded Bonds.”

All the provisions of the General Fee Revenue Indenture, as applicable to the Bonds, are hereby adopted as a part of this authorization as if set out at length herein.

Section 3. Bonds to be Issued as Additional Parity Bonds; Special Findings. The Bonds shall be issued as additional parity bonds under Article VIII of the General Fee Revenue Indenture.

In accordance with the provisions of Section 8.2(b) of the General Fee Revenue Indenture, the Board hereby finds and declares as follows:

- (a) The University is not now in default under the General Fee Revenue Indenture and no such default is imminent.

(b) Bonds the interest on which is excludable from gross income for purposes of federal income taxation shall be designated "General Fee Revenue Refunding Bonds, Series ____". If it is necessary and appropriate to issue a portion of the Bonds as bonds the interest on which is taxable for purposes of federal income taxation, such bonds shall be designated "General Fee Revenue Refunding Bonds, Series ____ (Taxable)". The series designation shall be completed to reflect the calendar year in which the Bonds are issued and to provide any further identification of the Bonds as is appropriate.

(c) The persons to whom the Bonds are to be delivered are set forth in Sections 7 and 9 hereof.

(d) All of the Bonds are to be issued by sale in accordance with Section 7 hereof.

(e) The sale price of the Bonds shall be as set forth in Sections 7 and 12 hereof.

(f) The only parity bonds that have previously been issued by the University under the General Fee Revenue Indenture and that are currently outstanding are those bonds listed in (i) – (xi) of Section 1 above.

(g) The Refunded Bonds are to be refunded from proceeds of the Bonds, subject to the determinations and conditions set forth in Sections 11 and 12 hereof.

The Trustee is hereby requested to authenticate and deliver the Bonds to the purchaser specified in Section 7 hereof upon payment of the purchase price designated therein.

Section 4. Source of Payment of the Bonds. The principal of and the interest on the Bonds shall be payable from (i) the gross revenues from those general tuition fees levied against students at the Auburn, Alabama campus and the Montgomery, Alabama campus of the University that are more particularly described and referred to as "General Fees" in the General Fee Indenture; (ii) the gross revenues derived by the University from the operation of its housing and dining facilities located on the Auburn campus and on the Montgomery campus that are more particularly described and referred to as "Housing and Dining Revenues" in the General Fee Indenture; (iii) the gross revenues derived by the University from the operation of its athletics programs that are more particularly described and referred to as "Athletic Fee Revenues" in the General Fee Indenture; and (iv) the several student fees levied against students at the Auburn campus and the Montgomery campus that are more particularly described and referred to as the "Pledged Student Fees" in the General Fee Indenture. The said General Fees, Housing and Dining Revenues, Athletic Fee Revenues, and Pledged Student Fees are referred to herein as the "Pledged Revenues."

Nothing contained in this authorization, in the Bonds, in the General Fee Revenue Indenture, or in the supplemental indentures hereinafter authorized shall be deemed to impose any obligations on the University to pay the principal of or the interest on the Bonds except from the Pledged Revenues. Neither the Bonds, nor the pledge or any agreement contained in the General Fee Revenue Indenture, in any supplemental indenture or in this authorization shall be or constitute an obligation of any nature whatsoever of the State of Alabama, and neither the Bonds nor any obligation arising from the aforesaid pledge or agreements shall be payable out of any moneys appropriated to the University by the State of Alabama. The agreements, covenants or representations contained in this authorization, in the Bonds, in the General Fee Revenue Indenture, and in any supplemental indenture do not and shall never constitute or give rise to any personal or pecuniary liability or charge against the general credit of the University, and in the event of a breach of any such agreement, covenant or representation, no personal or pecuniary liability or charge payable directly or indirectly from the general revenues of the University shall arise therefrom. Nothing contained in this section shall, however, relieve the University from the observance and performance of the several covenants and agreements on its part herein contained.

Section 5. Bonds Payable at Par. All remittances of principal of and interest on the Bonds to the holders thereof shall be made at par without any deduction for exchange or other costs, fees or expenses. The bank or banks at which the Bonds shall at any time be payable shall be considered by acceptance of their duties hereunder to have agreed that they will make or cause to be made remittances of principal of and interest on the Bonds, out of the moneys provided for that purpose, in bankable funds at par without any deduction for exchange or other cost, fees or expenses. The University will pay to such bank or banks all reasonable charges made and expenses incurred by them in making such remittances in bankable funds at par.

Section 6. Authorization of Supplemental Indentures. The Board does hereby authorize and direct the President of the University to approve, execute and deliver, for and in the name and behalf of the University, to the Trustee, a Supplemental General Fee Revenue Indenture with respect to each series of the Bonds, and does hereby authorize and direct the Secretary of the Board to affix the official seal of the University to said Supplemental General Fee Revenue Indenture and to attest the same.

Section 7. Sale of the Bonds. The Bonds may be sold as an underwritten public sale, or by a private placement with one or more banks or other institutional purchasers, as determined under Section 12 hereof. If the Bonds are sold through an underwritten public sale, the Board does hereby authorize and direct the President of the University to approve, execute and deliver, for and in the name and behalf of the University, one or more Bond Purchase Agreements with respect to each series of Bonds between the University and an underwriter or underwriters (the "Underwriter") approved under Section 12 of this authorization. If the Bonds are sold by private placement, the Board does hereby authorize and direct the President of the University to approve, execute and deliver, for and in the name and behalf of the University, a Placement Agreement with the purchaser(s) of the Bonds approved under Section 12 of this resolution.

Section 8. Authorization of Official Statements. The Board does hereby authorize and direct the Underwriter and/or Professionals designated under Section 14 of this authorization to

prepare and distribute, for and in the name and on behalf of the University, a Preliminary Official Statement and a final Official Statement with respect to each series of Bonds issued under this authorization. The Board does hereby further authorize and direct the President or the Executive Vice President of the University to execute and deliver, for and on behalf of the University, such final Official Statement(s) and does hereby declare that the Official Statement(s) so executed by the President or the Executive Vice President of the University shall be the Official Statement(s) of the University with respect to the Bonds covered by such Official Statement(s).

Section 9. Execution and Delivery of Bonds. The Board does hereby authorize and direct the President of the University to execute the Bonds, in the name and on behalf of the University, by causing his signature or a facsimile thereof to be placed or imprinted on the Bonds, and does hereby authorize and direct the Secretary of the Board to cause a facsimile of the official seal of the University to be imprinted on the Bonds and to attest the same by causing his signature or a facsimile thereof to be placed or imprinted on the Bonds, all in the manner provided in the General Fee Revenue Indenture. The President of the University is hereby further authorized and directed to deliver the Bonds, subsequent to their execution as provided herein to the Trustee, and to direct the Trustee to authenticate all the Bonds and to deliver them to the Underwriter, upon payment to the University of the purchase price therefor in accordance with the provisions of Sections 7 and 12 hereof.

Section 10. Application of Proceeds. The entire proceeds derived by the University from the sale of the Bonds shall be paid to the Trustee under the General Fee Revenue Indenture. The Trustee is thereupon authorized and directed to apply and disburse such moneys for the purposes and in the order specified in the Supplemental General Fee Indentures.

Section 11. Redemption of Refunded Bonds; Authorization of Escrow Trust Agreement. Any series of Outstanding Bonds to be refunded by the Bonds or any series of the Bonds shall be called for redemption on the first date permitted for the call and redemption of such Outstanding Bonds subsequent to the date of issuance of the Bonds, at and for a redemption price equal to 100% of the principal amount of each bond so redeemed, plus accrued interest. The President and the Executive Vice President of the University are separately authorized to direct the Trustee to mail and/or publish notice of such redemption as required under the terms of the General Fee Revenue Indenture. Any such redemption notice mailed or published prior to the date of issuance of the Bonds shall provide that the call of the affected Refunded Bonds for redemption is contingent upon the issuance and sale of the Bonds.

Pursuant to Section 6.1(a) of the General Fee Revenue Indenture, the Board hereby confirms that the University is not in default under said indenture.

The President of the University is hereby authorized to approve, execute and deliver in the name and on behalf of the University an Escrow Trust Agreement or Agreements, between the University and the Trustee, if necessary or desirable, with respect to each series of Refunded Bonds to provide for the escrow and investment of proceeds of the Bonds until the redemption date of the Refunded Bonds.

Section 12. Authorization to Approve Certain Matters. The Board has determined that it is in the best interest of the University to authorize the issuance of the Bonds for the purposes described in this authorization and subject to the limitations of this authorization without a further meeting or approval of the Board. The Executive Vice President of the University and the Chairman of the Finance Committee of the Board are hereby authorized:

(a) to determine when and if any Bonds shall be issued and to approve the schedule of issuance for each series of Bonds; provided that no Bonds shall be issued under the authority of this authorization after December 31, 2018;

(b) to approve the principal amount of the Bonds to be issued in each series and the designation of the Bonds as tax-exempt or taxable Bonds; provided that the aggregate principal amount of each series of Bonds shall not exceed the amount necessary to pay the principal and interest on the Refunded Bonds (taking into account any original issue premium or discount) and the costs of issuing the Bonds;

(c) to determine which of the Refunded Bonds are to be refunded and redeemed by the Bonds; provided that any such refunding shall result in a minimum net present value savings of at least 3%;

(d) to determine whether the Bonds are to be sold to the public or are to be privately placed with one or more banks or other institutions, and the terms of either form of sale;

(e) to approve the forms of Supplemental General Fee Indenture(s), Bond Purchase Contract(s) (if the Bonds are sold to the public), Placement Agreement (if the Bonds are privately placed with a bank or financial institution), Preliminary Official Statement(s), Official Statement(s) and Escrow Agreement(s) to be delivered in connection with each series of Bonds;

(f) to approve the final form and pricing details of each series of Bonds, including the interest rates to be borne by such Bonds, the principal maturities thereof and any original issue discount or premium with respect to the Bonds; provided that the net interest cost of any series of Bonds shall not exceed 6%;

(g) to approve the expenses of issuing the Bonds; and

(h) to take such other steps and to execute and approve such other documents as may be necessary or appropriate to cause the Bonds to be issued, sold and delivered consistent with the provisions of this authorization and the General Fee Revenue Indenture.

The final approval by the Executive Vice President of the University and the Chairman of the Finance Committee of the Board of the items listed above may be conclusively evidenced by a certificate signed by each of them and delivered at the time of issuance of the Bonds.

Section 13. Severability. The various provisions of this authorization are hereby declared to be severable. If any provision hereof shall be held invalid by a court of competent jurisdiction, such invalidity shall not affect any other portion of this authorization.

Section 14. Designation of Professionals. The retention of PFM Financial Advisors LLC as financial advisor to the University, and the law firm of Balch & Bingham LLP as bond counsel to the University for the issuance of the Bonds are hereby authorized.

Section 15. General Authorization. The President of the University, the Executive Vice President of the University and the Secretary of the Board are hereby authorized to execute such further certifications or other documents and to take such other action as any of them may deem appropriate or necessary for the consummation of the matters covered by this authorization, to the end that the Bonds may be executed and delivered at the times and on the terms most advantageous to the University.



AUBURN UNIVERSITY

OFFICE OF THE VICE PRESIDENT FOR
BUSINESS & FINANCE AND CFO

To: Dr. Steven Leath, President

FROM: Kelli D. Shomaker, Vice-President for Business & Finance and CFO

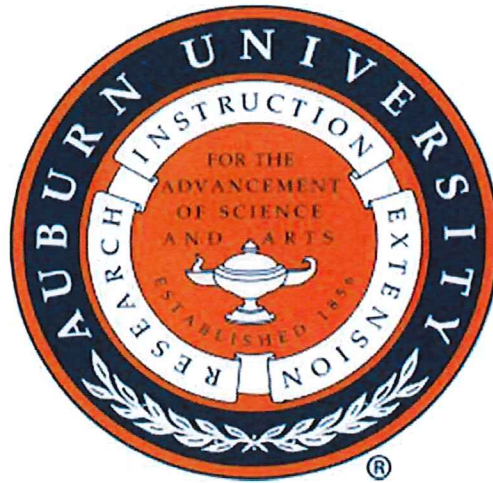
SUBJECT: Approval of 2017-2018 Auburn University Budget

DATE: August 14, 2017

This memorandum requests that the Board of Trustees approve the 2017-2018 Auburn University Budget for the fiscal year beginning October 1, 2017, and ending September 30, 2018 at the September 15, 2017 meeting.

Auburn University

Annual Budget



October 1, 2017 – September 30, 2018

The reports presented in this book represent the operating budget for all four divisions of Auburn University for FY 2017-18. The numbers are estimates of anticipated revenues and uses of those revenues for the fiscal year. The budget is a reflection of the University's plan to meet the strategic objectives recognized by the President and Board of Trustees in furtherance of the core mission of instruction, research, and public service. The reports are presented in multiple formats in order to give different perspectives of the same information as well as provide management with various tools with which to report on financial performance.

A handwritten signature in black ink, appearing to read "Kelli D. Shomaker".

Kelli D. Shomaker, CPA
Vice President of Business & Finance/CFO

A handwritten signature in black ink, appearing to read "Bryan Elmore".

Bryan Elmore
Director of Budget Services

Management Discussion

FY 2017-18 Operating Budget Highlights

The proposed budget for FY 2017-18 is \$1.271 billion and is divided into the four budgetary divisions as illustrated in **Figure 1**. This budget has increased by \$44 million, or 3.6%, from the approved FY 2016-17 budget.

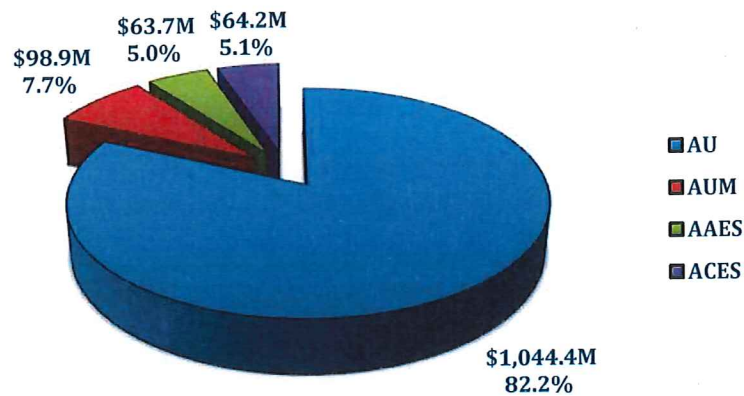


Figure 1: Auburn University Budget by Division

The budget is grouped into three fund types for revenue and expenses based on certain characteristics of the sources and uses of the funds: unrestricted, restricted, and auxiliary. As shown in **Figure 2**, an overwhelming majority of the University's funding falls into the unrestricted category.

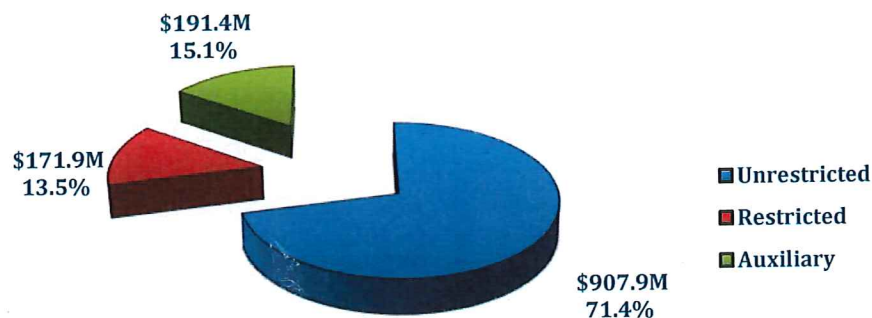


Figure 2: Auburn University Budget by Funding Category for the Auburn University System

Revenues

State appropriations revenue remains unchanged for FY 2017-18. The trend for growth in state appropriations since FY 2013-14 has been 1.2% as exhibited in **Figure 3**. The comparable trend from last year was 1.6%, meaning the outlook for significant growth in state appropriations is unlikely.

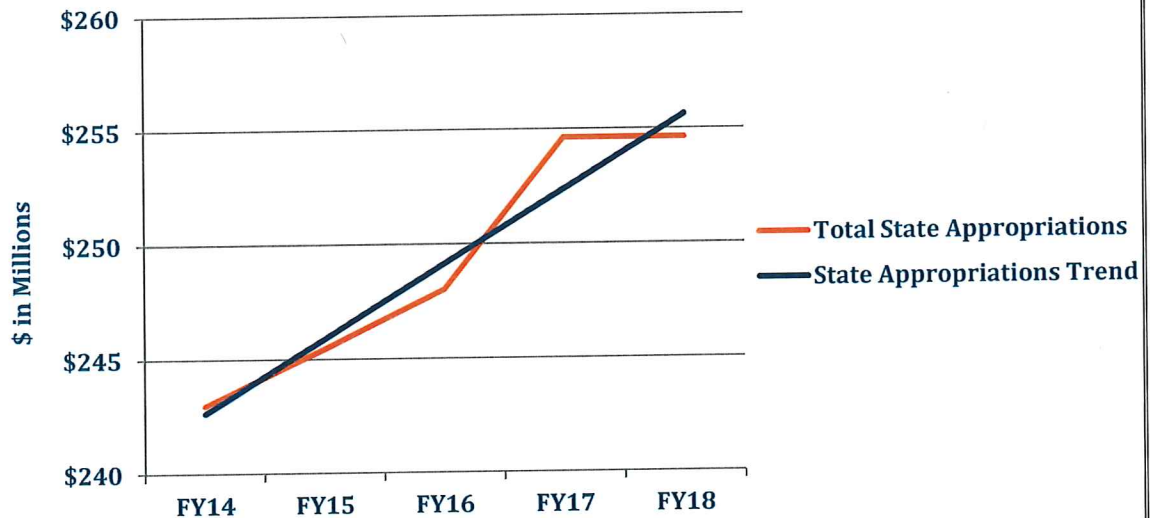


Figure 3: 5-Year Trend for State Appropriations for the Auburn University System

At the April 7, 2017 meeting of the Board of Trustees, tuition and fee increases were approved for both Auburn University (AU) and Auburn-Montgomery (AUM). In an effort to provide earlier awards of financial aid, the Board of Trustees approved a two-year tuition increase for Academic Years 2017-18 and 2018-19. The approved increase in the credit-hour tuition rates at both AU and AUM for both years is 3%.

The largest change in revenue from the prior year is in the tuition and fees category, which increased by \$29.3 million (5.5%). There were also slight increases in restricted revenues of \$7.2 million (4.4%) and in auxiliary revenues of \$6.3 million (3.4%).

The University has numerous revenue sources as seen in **Figure 4**. State appropriations and tuition & fees make up almost 64% of the total proposed budget for FY 2017-18, which is consistent with the proportion they represented in FY 2016-17.

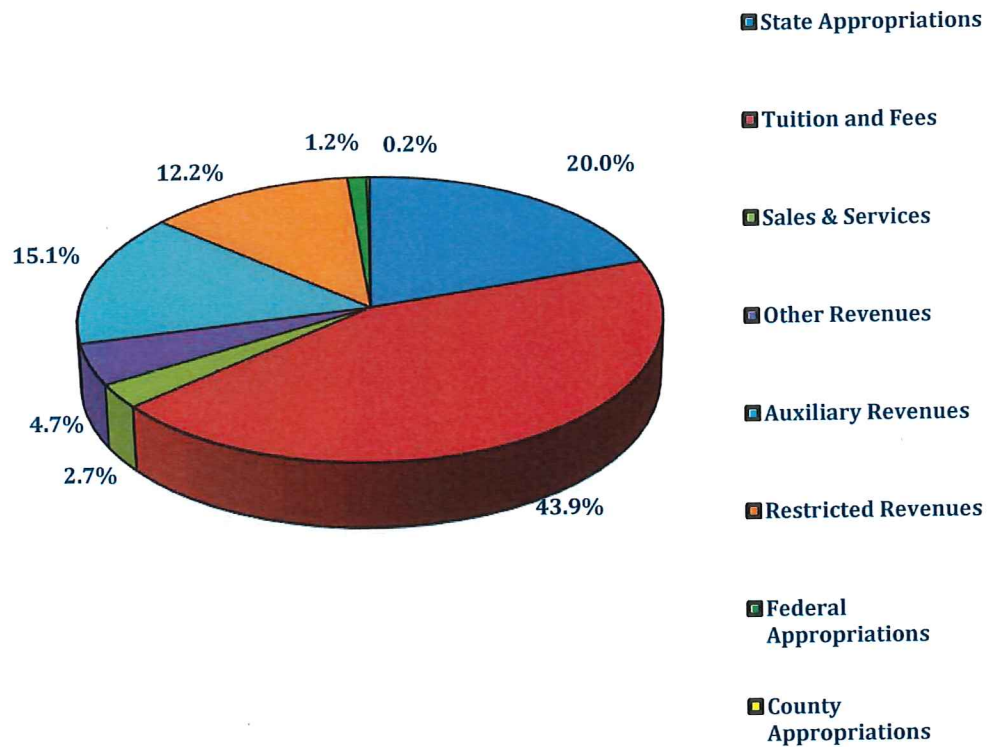


Figure 4: Total Revenue for the Auburn University System

Expenses

The major increases in expenses for the FY 2017-18 budget are related to compensation, an increase of \$22.9 million across all divisions. Like the previous approved budget, a merit cap was calculated for each of the units based on certain criteria, which results in an average merit-based permanent salary increase of 3.0% for all divisions of Auburn University. With the exception of AUM, the proposed budget also includes provisions for a one-time salary supplement, which is consistent with recent years. In a slight change from prior years, the one-time supplement is also capped at 3.0%. In addition to the permanent merit adjustments, each division funded promotions for its faculty and staff.

Other planned increases are for student aid and waivers, mandatory cost increases under University contracts, or operational needs for new buildings. Student aid and waivers increased by \$11.3 million from the prior year. The mandatory cost increases are for the contract with the City of Auburn for police and fire services, inflationary cost increases on computer software, and library periodical contract increases. Those costs increases total approximately \$2.5 million. Several new buildings will be coming online towards the end of FY 2016-17 and during FY 2017-18. The impact of these new buildings results in an increase of \$1.4 million in the budget for utilities and maintenance. In addition to this, the budget includes an additional contingency of \$6 million to be used for potential reallocation in future years.

The University presents its expense budget in two major ways: by object and by function. There are four major categories used to identify expenses by object: Salaries and Wages, Employee Benefits, Operations and Maintenance, and Student Aid. The Operations and Maintenance category can also be broken into additional categories for: Debt Service, Repairs and Renovation, and Net Mission Enhancement Funding. The breakdown of expenses by object is illustrated with **Figure 5** on the following page.

The University also budgets and records its expenses by function. The functional categories are meant to identify the purpose for the expense. **Figure 6**, on the following page, gives the breakdown by function for the University. The functional expense breakdown only includes unrestricted funds as restricted and auxiliary funds have multiple functional classifications that are not readily assignable to one of the categories.

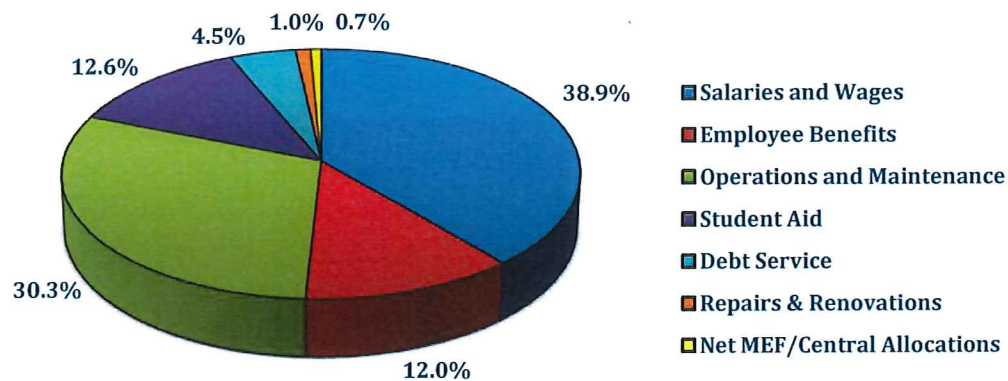


Figure 5: Expenses by Object for the Auburn University System

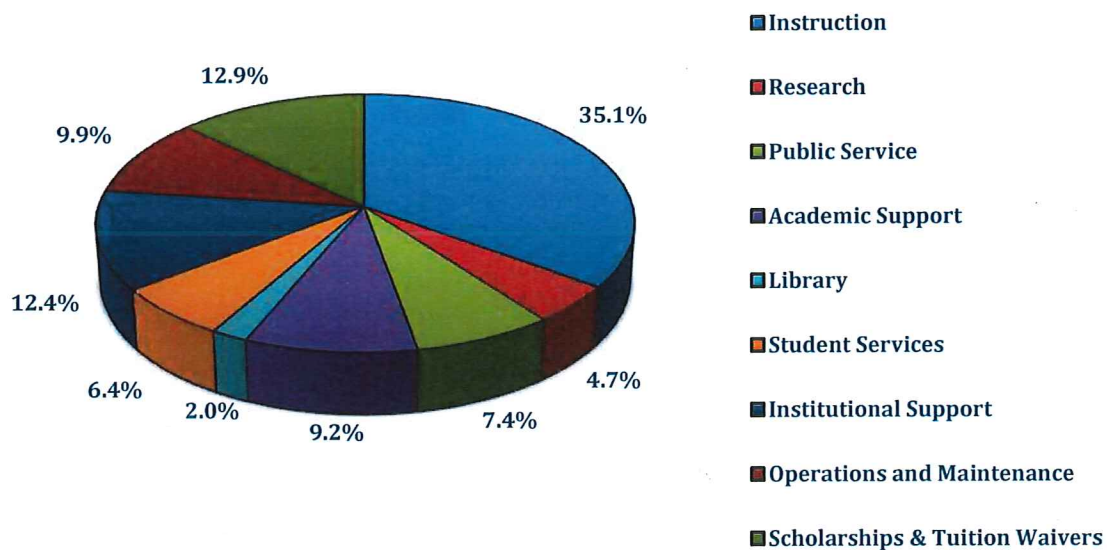


Figure 6: Expenses by Function for the Auburn University System

Strategic Budgeting Initiative (SBI)

This proposed budget marks the second year of budget development under the SBI. The same principles for revenue and indirect expense allocation apply, although the variable percentages changed to be reflective of the most recent full year of data (for academic and fiscal year 2015-16). The specific data points and percentages are on the tables in the Allocation Metrics section.

During the budget development cycle for FY 2017-18, the governance structures were instituted for the first time. The University Budget Advisory Committee is a previously existing committee and its charge is to provide oversight for the budgeting process. Additionally, the committee serves in an advisory role to senior administration on high-level budgetary matters. Its full charge and membership can be found at <http://www.auburn.edu/administration/president/univcomm/universitybudgetadvisory-resturctured-O.html>.

Two new committees were created as a part of the governance structure: the Central Unit Allocation (CUAC) and Repair & Renovation/Space Management (RRSMC) Committees. The CUAC is designed to be a set of checks and balances against growth in administrative budgets and to assess performance of the central units against service expectations and other benchmarking norms. Its charge and composition is located at <http://www.auburn.edu/administration/president/univcomm/centralunitallocations.html>.

The RRSMC was formed to validate space allocation data and serve as a broker of space. In addition, they provide recommendations on appropriate levels of funding for Auburn's Repair & Renovation program, which is overseen by Facilities Management. More information on this committee can be found at <http://www.auburn.edu/administration/president/univcomm/spacemanagement-repair-renovation.html>.

Mission Enhancement Fund (MEF)

The MEF participation rate continues to be 17.5% assessed on all allocated revenues and certain direct revenues. The funds generated are used for both subvention and strategic investment. For FY 2017-18, the amount generated in the MEF before reallocation is \$96.9 million. Subvention needs are approximately \$87.6 million, which yields a strategic investment portion of \$9.3 million.

Other Information

Salary & Wage Guidelines for FY 2017-18 budget development can be found at <http://www.auburnuniversity.net/budget/includes/forms/1371837383007086.pdf>.

For more information on the strategic budget model initiative, please see <http://www.auburn.edu/academic/provost/Strategic%20Budget%20Initiative/index.html>.

FINANCE COMMITTEE

RESOLUTION

AUTHORIZATION TO USE AUCTION INTERNET SITES FOR DISPOSAL OF SURPLUS
PROPERTY

WHEREAS, under the Code of Alabama, 1975, Section 16-48-2, Auburn University has the right to “dispose of any property...as to it may seem best for the purposes of its institution and any and all sales of property, real or personal heretofore made pursuant to and by authority of action of the board of trustees”; and

WHEREAS, currently the only approved option for public sale is through a sealed bid process; and

WHEREAS, the ability to auction surplus items, specifically through an on-line auction site, will allow accessibility of the items to a greater population, and thus increase the sales price.

NOW, THEREFORE, BE IT RESOLVED by Auburn’s Board of Trustees that the use of auction internet sites for the disposal of surplus property is an approved method.



AUBURN UNIVERSITY

OFFICE OF THE VICE PRESIDENT FOR
BUSINESS & FINANCE AND CFO

To: Dr. Steven Leath, President

FROM: Kelli D. Shomaker, Vice-President for Business & Finance and CFO



SUBJECT: Approval of auction liquidity services for disposal of surplus property

DATE: August 14, 2017

This memorandum requests that the Board of Trustees approve the use of auction internet sites for the disposal of surplus property. Currently the only option for public sale is through a sealed bid process. The ability to auction surplus items, specifically through an on-line auction site, will allow accessibility of the items to a greater population, and thus increase the sales price.

Per Code of Alabama, 1975, Section 16-48-2, Auburn has the right to "dispose of any property...as to it may seem best for the purposes of its institution and any and all sales of property, real or personal heretofore made pursuant to and by authority of action of the board of trustees".

EXECUTIVE COMMITTEE

PROPOSED AWARDS AND NAMINGS

Time will be allocated for discussing of awards and namings.