

**Office of the Provost**

University of Maryland, Baltimore County  
1000 Hilltop Circle  
Baltimore, Maryland 21250

PHONE: 410-455-2333


FAX: 410-455-1107

VOICE/TTY: 410-455-3233

WEB: [www.umbc.edu/](http://www.umbc.edu/)**interoffice****MEMORANDUM**  


DATE: October 16, 2009

TO: Dr. Elliot Hirshman  
Provost and Senior Vice President for Academic Affairs

FROM: Antonio Moreira, Ph.D.   
Vice Provost for Academic Affairs/Chair, Classroom Committee

SUBJECT: Plan for Classroom Renewal Program

On behalf of the campus Classroom Committee, I am pleased to forward to you a proposal for a comprehensive maintenance and upgrade program for the classroom facilities at UMBC. This proposal had the unanimous endorsement of the committee members at the October 8, 2009 meeting.

The proposed program integrates renew of technology, furniture and finishes in all classrooms (including those in the current pilot program) on campus on a fixed cyclical schedule. At steady state, technology renewals are proposed on a 6-year cycle and overall classroom renewal is proposed on a 18-year cycle. This program ramps up over time taking into consideration renovations recently made, the classrooms included in the pilot program, classrooms that currently lack technology and eventually over the years classrooms in the new buildings that will also need maintenance. The committee members believe that this program will be central to the student recruitment and retention efforts at UMBC.

To our knowledge, this is the first time that an integrated program for renewal of the campus classroom facilities has been prepared. While I thank all the members of the Classroom Committee who strongly supported and helped shape this proposal, I wish to especially thank the authors of the proposal for the many hours placed into the development of this program.

I look forward to your review of this proposal and to discussing with you next steps for campus consideration of the program and hopefully its integration into the campus budget process.

Thank you.

AM:sll  
Attachment

Cc: Classroom Committee Members

September 8, 2009

TO: Antonio Moreira, Vice Provost for Academic Affairs

FR: John Fritz, Assistant VP, Instructional Technology & New Media, DoIT  
Julianne Simpson, Assistant Director for Planning, Facilities Management  
Kurt Morton, Senior Associate, Registrar  
Steve Anderson, Manager, Classroom Technology, DoIT  
Celso Guitian, Campus Planner, Facilities Management  
Susan Salko, Assistant Registrar

RE: **Classroom Renewal Program**

As a sub-committee to the Classroom Committee, we were tasked with developing a comprehensive plan to address the renewal of classrooms. The plan outlined in this memo will require a commitment of \$180,000 to \$255,000 per year to upgrade and retain a standard level of finishes, lighting, furniture, and classroom technology for all Registrar controlled classrooms.

### **The Need**

The conditions of general purpose classrooms on campus vary greatly. There are state-of-the-art classrooms that integrate technology into a comfortable and attractive learning environment. These are typically located in buildings that have been built or renovated in the last ten years. However, the majority of classrooms are located in buildings that are more than thirty years old. These classrooms lag behind the campus standard for design, in terms of finishes, technology and lighting, and need to be upgraded.

Currently, Facilities Management's Operations & Maintenance Services provides regular maintenance of Registrar controlled classrooms for repair of mechanical and electrical systems, repainting, and replacement or repair of damaged systems, like flooring and ceiling tiles. This has retained the functionality of classrooms, but cannot address the wholesale replacement of components (e.g. whiteboards, ceiling systems) nor more significant needed improvements such as upgrade of electrical systems required for new technologies and/or energy saving measures. A new commitment is needed to address the upgrade of existing classrooms through the creation of a program to renew the technology, furniture and finishes of all classrooms on a fixed cyclical schedule.

### **Proposed Solution**

The proposed Classroom Renewal Program will focus on three components: classroom condition, classroom furniture, and classroom technology. The program will bring the condition of all existing Registrar controlled classrooms up to an established standard and will create a cyclical and sustaining program to maintain this condition into the future.

The proposed Classroom Renewal Program assumes the following:

- **Renovation:** Classroom renewals will include replacement of flooring and ceiling grid/acoustic tiles, installation of energy efficient lighting and controls, new paint, new window treatment and white boards. The first 15 years will target the renovation of four classrooms per year. In this time frame the 50 existing Registrar controlled classrooms and 7 departmentally controlled classrooms (identified in the Pilot Program by Vice Provost Antonio Moriera for shared use as a Registrar controlled classroom) will be renewed to the campus classroom standard. *See the attached Appendix A for a list of classrooms targeted for renewal in the first 15 years.*

Beyond year 15, the inventory of classrooms increases and four to five classrooms are targeted for renewal every year to plan for 100% renewal every 18 years. *See Appendix B for a list of Additional Registrar-Controlled Classrooms Targeted for Renewal After Fifteen Years.*

The Sub-committee has also identified additional departmentally-controlled classrooms that could benefit from the renovations and technology upgrades of the Pilot Program. *The classrooms are listed in Appendix C Additional Departmentally-Controlled Classrooms that could Benefit from the Pilot Program.* The listed budget figures do not take into account the incorporation of these classrooms into the Pilot Program.

- **Technology:** In the first five years, technology upgrades will be provided to 23 classrooms that lack technology. After the first five years, technology renewals are proposed on a 6-year cycle. The budget below targets 12 classrooms a year. Technology renewals consist of replacement of equipment components that are at the end of their useful life. This sustained commitment will ensure that the technology provided in the classrooms is kept functioning and current.
- **Furniture:** As the condition of existing furniture in classrooms varies widely, the budget for replacement of furniture corresponds to roughly 50% of the furniture in the rooms. This budget will allow for selective replacements based on actual condition.

## Proposed Budget

| Phase of Program and Year | Average Annual Budget (\$ in 2009 dollars*) |            |           |         |
|---------------------------|---|------------|-----------|---------|
|                           | Renovation                                  | Technology | Furniture | Total   |
| Year 1-5                  | 125,000                                     | 25,000     | 30,000    | 180,000 |
| Year 6-15                 | 125,000                                     | 75,000     | 30,000    | 230,000 |
| Beyond Year 15            | 140,000                                     | 75,000     | 40,000    | 255,000 |

\* Based upon 2009 dollars. An escalation factor should be applied to future years.

## **Basis of Cost Estimate**

Facilities Management's Planning & Construction Services developed the proposed budget based on a visual inspection of all of the Registrar-controlled classrooms on campus. Unit costs derived from similar projects were applied to three categories of work: renovation, technology, and furniture.

Renovation costs for painting, ceiling replacement, flooring, lighting and window treatments were based on the areas of flooring, ceiling, window and wall surface. Electrical upgrades and installation of fixed equipment, like white boards, were estimated as a lump sum per room.

Technology upgrades and renewals were based on a sum of approximately \$6,000 per room.

Furniture costs assumed a 50% replacement strategy with the unit costs of the applicable type of furniture (i.e. tablet arm chairs or chair and tables) multiplied by half of the number of stations in the classroom.

## **Implementation Plan: First Five Years**

If funding was available for all three components of work (i.e. renovation, technology and furniture), we recommend the following schedule of specific upgrades:

### **Summer of First Year**

The first year targets one room on the Pilot Program and three rooms on the ground floor of Math/Psychology that currently lack new technology.

Upgrade four classrooms at an estimated cost of \$122,000 for renovations, \$24,000 for technology and \$31,000 for furniture.

#### **Sondheim 406 and Math/Psychology 104-106**

- Replace the existing flooring, ceiling, and paint the walls.
- Install new lighting and low-voltage controls.
- Install new window shades.
- Install new technology upgrades and equipment.
- New furniture. Assuming 50% of existing furniture can be salvaged and reused.

A detailed breakdown of estimated costs by room is listed below (in 2009 dollars):

| <b>Classroom</b>    | <b>Renovation</b> | <b>Technology</b> | <b>Furniture</b> | <b>Total</b>   |
|---------------------|-------------------|-------------------|------------------|----------------|
| Sondheim 406        | 25,000            | 6,000             | 5,000            | 36,000         |
| Math/Psychology 104 | 38,000            | 6,000             | 11,000           | 55,000         |
| Math/Psychology 105 | 25,000            | 6,000             | 4,000            | 35,000         |
| Math/Psychology 106 | 38,000            | 6,000             | 11,000           | 55,000         |
| <b>Total</b>        | <b>122,000</b>    | <b>24,000</b>     | <b>31,000</b>    | <b>177,000</b> |

### **Summer of Second Year**

The second year completes the first floor of Math/Psychology completing the technology upgrades of this building and begins the renovation of the ground floor of the Fine Arts Building. Classrooms on the ground level of the Fine Arts Building are targeted for renewal in the second and third year to ensure adequate service out of the classrooms prior to the building being repurposed and renovated in the distant, but foreseeable future.

Upgrade four classrooms at an estimated cost of \$134,000 for renovations, \$24,000 for technology and \$32,000 for furniture.

#### **Math/Psychology 101-103 and Fine Arts 006**

- Replace the existing flooring, ceiling, and paint the walls.
- Install new lighting and low-voltage controls.
- Install new window shades.
- Install new technology upgrades and equipment.
- New furniture. Assuming 50% of existing furniture can be salvaged and reused.

A detailed breakdown of costs by room is listed below (in 2009 dollars):

| <b>Classroom</b>    | <b>Renovation</b> | <b>Technology</b> | <b>Furniture</b> | <b>Total</b>   |
|---------------------|-------------------|-------------------|------------------|----------------|
| Math/Psychology 101 | 38,500            | 6,000             | 10,500           | 55,000         |
| Math/Psychology 102 | 25,000            | 6,000             | 4,000            | 35,000         |
| Math/Psychology 103 | 38,500            | 6,000             | 10,500           | 55,000         |
| Fine Arts 006       | 32,000            | 6,000             | 7,000            | 45,000         |
| <b>Total</b>        | <b>134,000</b>    | <b>24,000</b>     | <b>32,000</b>    | <b>190,000</b> |

### **Summer of Third Year**

Continue with the renovation of the Fine Arts Building.

Upgrade four classrooms at an estimated cost of \$132,000 for renovations, \$18,000 for technology and \$35,000 for furniture.

#### **Fine Arts 015, 018, 215 and 530**

- Replace the existing flooring, ceiling, and paint the walls.
- Install new lighting and low-voltage controls.
- Install new technology upgrades and equipment (except FA 215).
- New furniture. Assuming 50% of existing furniture can be salvaged and reused.

A detailed breakdown of costs by room is listed below (in 2009 dollars):

| <b>Classroom</b> | <b>Renovation</b> | <b>Technology</b> | <b>Furniture</b> | <b>Total</b>   |
|------------------|-------------------|-------------------|------------------|----------------|
| Fine Arts 015    | 26,000            | 6,000             | 7,000            | 39,000         |
| Fine Arts 018    | 28,000            | 6,000             | 7,000            | 41,000         |
| Fine Arts 215    | 54,000            | 0                 | 13,000           | 67,000         |
| Fine Arts 530    | 24,000            | 6,000             | 8,000            | 38,000         |
| <b>Total</b>     | <b>132,000</b>    | <b>18,000</b>     | <b>35,000</b>    | <b>185,000</b> |

### **Summer of Fourth and Fifth Year**

Upgrade four classrooms per year at an estimated cost of \$130,000 for renovations, \$24,000 for technology and \$25,000 for furniture based upon these principles:

- Upgrade classrooms first that have not had technology upgrades completed or are in the process of being upgraded.
- Complete technology upgrades of registrar-controlled classrooms, including lower level of Math/Psychology, Academic IV 208 and 210.
- Upgrade any additional classrooms that are in the first phase of the Pilot Program.

### **Implementation Plan: Sixth through Fifteenth Year**

We recommend that a minimum of \$235,000 (in 2009 dollars) per year be committed to upgrade of specific classrooms selected based upon these general principles:

- Complete renewal of all existing registrar controlled classrooms in Sondheim Hall, Academic IV and Math/Psychology that have been identified as having finishes, equipment and lighting below the campus classroom standard.
- Renew all classrooms on a floor at one time, if possible.
- Includes \$75,000 per year for technology renewals on a six year cycle.

### **Implementation Plan: Beyond Fifteenth Year**

For subsequent years, we recommend that a minimum of \$255,000 (in 2009 dollars) per year be committed to the cyclical renewal of all registrar controlled classrooms on campus (includes classrooms in Appendix A plus classrooms in the Public Policy, Information Technology/Engineering, and Physics buildings – Appendix B). This plan envisions renewals on an

18-year cycle for flooring and ceiling replacement, window treatment, upgraded lighting, and painting, and technology renewals on a 6-year cycle.

In the future, additional classrooms will be added to the campus inventory, (beginning with six classrooms in the proposed Performing Arts & Humanities Center). The inclusion of additional classroom spaces may require additional funding for renewal.

As a reminder, in order to facilitate completion of classroom upgrade(s) during a summer, funding must be identified and approved by spring of the previous year. In this way, Planning and Construction Services can initiate design during the fall and schedule construction during the following intended summer; furniture with long-lead times can be ordered; OIT's Classroom Technology unit can have sufficient time to plan and purchase equipment for summer installation; and the Registrar can have sufficient time to arrange for specific classrooms to be off-line during the period of summer renovation.

If you have any questions or need more information, please let us know.

**Appendix A**

**List of Classrooms Targeted for Renewal in First Fifteen Years**

Classroom Renewal Program

Sept 2009

|                        | Building Name   | Bldg. Abrev | Room # | Capacity | Size in SF | Scheduling Control |
|------------------------|-----------------|-------------|--------|----------|------------|--------------------|
| <b>Academic IV</b>     |                 |             |        |          |            |                    |
| 1                      | Academic IV     | ACIV        | 006    | 45       | 523        | Registrar          |
| 2                      | Academic IV     | ACIV        | 007    | 15       | 341        | Registrar          |
| 3                      | Academic IV     | ACIV        | 010    | 15       | 215        | Registrar          |
| 4                      | Academic IV     | ACIV        | 011    | 30       | 523        | Registrar          |
| 5                      | Academic IV     | ACIV        | 013    | 50       | 806        | Registrar          |
| 6                      | Academic IV     | ACIV        | 014    | 50       | 803        | Registrar          |
| 7                      | Academic IV     | ACIV        | 015    | 50       | 806        | Registrar          |
| 8                      | Academic IV     | ACIV        | 108    | 25       | 868        | Registrar          |
| 9                      | Academic IV     | ACIV        | 145    | 65       | 822        | Registrar          |
| 10                     | Academic IV     | ACIV        | 150    | 65       | 804        | Registrar          |
| 11                     | Academic IV     | ACIV        | 151    | 65       | 798        | Registrar          |
| 12                     | Academic IV     | ACIV        | 207    | 25       | 634        | Registrar          |
| 13                     | Academic IV     | ACIV        | 210    | 30       | 577        | Registrar          |
| 14                     | Academic IV     | ACIV        | 305    | 40       | 836        | Registrar          |
| <b>Biology</b>         |                 |             |        |          |            |                    |
| 15                     | Biology         | BIOL        | 120    | 72       | 1260       | Registrar          |
| <b>Fine Arts</b>       |                 |             |        |          |            |                    |
| 16                     | Fine Arts       | FA          | 006    | 60       | 854        | Registrar          |
| 17                     | Fine Arts       | FA          | 015    | 55       | 691        | Registrar          |
| 18                     | Fine Arts       | FA          | 018    | 55       | 730        | Registrar          |
| 19                     | Fine Arts       | FA          | 215    | 81       | 1387       | Registrar          |
| 20                     | Fine Arts       | FA          | 306    | 141      | 2133       | Registrar          |
| 21                     | Fine Arts       | FA          | 530    | 24       | 603        | Registrar          |
| <b>Math/Psychology</b> |                 |             |        |          |            |                    |
| 22                     | Math/Psychology | MP          | 008    | 36       | 584        | Registrar          |
| 23                     | Math/Psychology | MP          | 010    | 36       | 584        | Registrar          |
| 24                     | Math/Psychology | MP          | 012    | 36       | 578        | Registrar          |



|    |                 |    |     |    |     |           |
|----|-----------------|----|-----|----|-----|-----------|
| 25 | Math/Psychology | MP | 101 | 64 | 948 | Registrar |
| 26 | Math/Psychology | MP | 102 | 32 | 575 | Registrar |
| 27 | Math/Psychology | MP | 103 | 64 | 956 | Registrar |
| 28 | Math/Psychology | MP | 104 | 64 | 956 | Registrar |
| 29 | Math/Psychology | MP | 105 | 32 | 575 | Registrar |
| 30 | Math/Psychology | MP | 106 | 64 | 948 | Registrar |

|                      |  |   |   |   |   |   |
|----------------------|--|---|---|---|---|---|
| <b>Sondheim Hall</b> |  | - | - | - | - | - |
|----------------------|--|---|---|---|---|---|

|    |               |      |     |    |      |           |
|----|---------------|------|-----|----|------|-----------|
| 31 | Sondheim Hall | SOND | 101 | 80 | 1188 | Registrar |
| 32 | Sondheim Hall | SOND | 103 | 80 | 1193 | Registrar |
| 33 | Sondheim Hall | SOND | 105 | 80 | 1187 | Registrar |
| 34 | Sondheim Hall | SOND | 107 | 36 | 620  | Registrar |
| 35 | Sondheim Hall | SOND | 108 | 40 | 593  | Registrar |
| 36 | Sondheim Hall | SOND | 109 | 40 | 593  | Registrar |
| 37 | Sondheim Hall | SOND | 110 | 40 | 592  | Registrar |
| 38 | Sondheim Hall | SOND | 111 | 40 | 592  | Registrar |
| 39 | Sondheim Hall | SOND | 112 | 40 | 593  | Registrar |
| 40 | Sondheim Hall | SOND | 113 | 40 | 593  | Registrar |
| 41 | Sondheim Hall | SOND | 114 | 40 | 657  | Registrar |
| 42 | Sondheim Hall | SOND | 202 | 40 | 592  | Registrar |
| 43 | Sondheim Hall | SOND | 203 | 40 | 590  | Registrar |
| 44 | Sondheim Hall | SOND | 204 | 40 | 591  | Registrar |
| 45 | Sondheim Hall | SOND | 205 | 40 | 593  | Registrar |
| 46 | Sondheim Hall | SOND | 206 | 40 | 585  | Registrar |
| 47 | Sondheim Hall | SOND | 207 | 36 | 622  | Registrar |
| 48 | Sondheim Hall | SOND | 208 | 40 | 593  | Registrar |
| 49 | Sondheim Hall | SOND | 209 | 40 | 593  | Registrar |
| 50 | Sondheim Hall | SOND | 406 | 40 | 643  | PSYCH     |
| 51 | Sondheim Hall | SOND | 409 | 72 | 1208 | Registrar |

|                        |  |  |  |  |  |  |
|------------------------|--|--|--|--|--|--|
| <b>Other Buildings</b> |  |  |  |  |  |  |
|------------------------|--|--|--|--|--|--|

|    |                |      |     |    |     |      |
|----|----------------|------|-----|----|-----|------|
| 52 | Meyerhoff Chem | MYER | 256 | 24 | 703 | CHEM |
| 53 | Administration | AD   | 218 | 20 | 305 | GRAD |
| 54 | Engineering    | ENGR | 022 | 20 | 853 | OIT  |
| 55 | Engineering    | ENGR | 023 | 20 | 889 | OIT  |
| 56 | Public Policy  | PUP  | 203 | 24 | 586 | SOC  |
| 57 | Public Policy  | PUP  | 367 | 25 | 518 | ECON |

**Appendix B**

**List of Additional Registrar-Controlled Classrooms Targeted for Renewal After Fifteen Years**

Classroom Renewal Program

Sept 2009

|  | Building Name   | Bldg. Abrev | Room # | Capacity | Size in SF | Scheduling Control |
|--|-----------------|-------------|--------|----------|------------|--------------------|
| <b>Information Technology/Engineering</b>      |                 |             |        |          |            |                    |
| 1  | Inf Tech/Eng    | ITE         | 227    | 55       | 1149       | Registrar          |
| 2  | Inf Tech/Eng    | ITE         | 229    | 55       | 1122       | Registrar          |
| 3  | Inf Tech/Eng    | ITE         | 231    | 55       | 1138       | Registrar          |
| 4  | Inf Tech/Eng    | ITE         | 233    | 55       | 1125       | Registrar          |
| 5  | Inf Tech/Eng    | ITE         | 237    | 30       | 791        | Registrar          |
| 6  | Inf Tech/Eng    | ITE         | 239    | 30       | 790        | Registrar          |
| 7  | Inf Tech/Eng    | ITE         | 241    | 30       | 790        | Registrar          |
| 8  | Inf Tech/Eng    | ITE         | 456    |          | 1404       | Registrar          |
| <b>Physics</b>                                 |                 |             |        |          |            |                    |
|  |                 | -           | -      | -        | -          | -                  |
| 9  | Physics         | PHYS        | 107    | 24       | 790        | Registrar          |
| 10   | Physics         | PHYS        | 201    | 38       | 790        | Registrar          |
| <b>Public Policy</b>                           |                 |             |        |          |            |                    |
|  |                 | -           | -      | -        | -          | -                  |
| 11   | Public Policy   | PUP         | 206    | 50       | 1072       | Registrar          |
| 12   | Public Policy   | PUP         | 208    | 50       | 1130       | Registrar          |
| <b>Performing Arts and Humanities Building</b> |                 |             |        |          |            |                    |
| 1  | Performing Arts | PAHB        |        |          |            | Registrar          |
| 2  | Performing Arts | PAHB        |        |          |            | Registrar          |
| 3  | Performing Arts | PAHB        |        |          |            | Registrar          |
| 4  | Performing Arts | PAHB        |        |          |            | Registrar          |
| 5  | Performing Arts | PAHB        |        |          |            | Registrar          |
| 6  | Performing Arts | PAHB        |        |          |            | Registrar          |

**Appendix C**

**List of Additional Departmentally-controlled Classrooms that Could Benefit from the Pilot Program**

Classroom Renewal Program

Sept 2009

|                   | Building<br>Name | Bldg.<br>Abrev | Room # | Capacity | Size<br>in<br>SF | Scheduling<br>Control |
|-------------------|------------------|----------------|--------|----------|------------------|-----------------------|
| Various Buildings |                  |                |        |          |                  |                       |
| 1                 | Academic IV      | ACIV           | 121    | 29       | 564              | EDUC                  |
| 2                 | Academic IV      | ACIV           | 208    | 30       | 927              | EDUC                  |
| 3                 | Biology          | BIOL           | 004    | 73       | 846              | BIOL                  |
| 4                 | Fine Arts        | FA             | 011    | 90       | 1590             | MUSIC                 |
| 5                 | Fine Arts        | FA             | 212    | 20       | 469              | MUSIC                 |
| 6                 | Fine Arts        | FA             | 529    | 17       | 670              | INDS                  |
| 7                 | Math/Psychology  | MP             | 012A   | 20       | 303              | MATH                  |
| 8                 | Sondheim Hall    | SOND           | 414    | 43       | 835              | PSYCH                 |
| 9                 | Theat Acad Serv  | THAC           | 117    | 24       | 432              | THEATER               |
| 10                | A O K Library    | LIB            | 216M   | 25       | 385              | HONORS                |
| 11                | Engineering      | ENG            | 112    |          | 850              | MECH ENG              |
| 12                | ITE Bldg         | ITE            | 406    |          | 800              | INF TECH              |