

AICT Technology Enhanced Classroom Upgrades 5 Year Plan

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This document is to help outline the renewal plans over the next 5 years for Technology Enhanced classrooms across campus.

There are three major items that are being addressed with this plan:

1. The analogue sunset and move to digital Audiovisual equipment in the non Fast Track style rooms including CCIS and ECHA;
2. The need for standardization of equipment and installation style across the technology enhanced classrooms;
3. The upgrade of equipment to meet the growing needs of the users.

This proposal standardizes to 5 main styles of rooms:

1. Fast track style (single projector)
2. Single projection Lecture Theatres
3. Dual projection Lecture Theatres
4. Videoconferencing Rooms
5. ECHA Seminar Rooms

While every effort will be made to standardize the equipment in the rooms, there are some rooms that due to space or instructional requests will be slightly different. It is our hope that even when these rooms are slightly different in scope, we hope to be able to standardize the equipment used in the rooms as much as possible to allow for ease of maintenance and usability.

Assumptions:

The Dentistry/Pharmacy rooms will not be upgraded due to the building being converted for administrative purposes.

Budget:

The budget is \$2,002,624 annually, which is made up of \$1.4 million from the enhancement fund and \$602,624 from the renewal budget.

Considerations:

Consultation would be needed with the current users of the technology enhanced classrooms to ensure that the smaller form factor podiums would still meet their needs.

Computers and projectors have been proven to run best on a 4 year renewal cycle.

Facilities and Operations charges for flooring, podium repairs, electrical and carpentry has not been included in this document. Although there is existing electrical and data lines in the rooms currently, the need to move or rerun these utilities may add a significant cost to the project.

Labour and/or outside contractors has not been factored into this document.

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Year by Year Expenditures

Year	Budget	Expenditures	Carry over	Digital Upgrades	Fast Track Renewals
2012	\$2,002,624.00	\$1,237,200.00	\$765,424.00	39	0
2013	\$2,002,624.00	\$1,305,800.00	\$696,824.00	45	0
2014	\$2,002,624.00	\$1,736,800.00	\$265,824.00	36	88
2015	\$2,002,624.00	\$1,522,400.00	\$480,224.00	22	12
2016	\$2,002,624.00	\$1,817,900.00	\$184,724.00	68	14

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Existing Fast Track Room Upgrades

Number of Rooms Affected: 115

Upgrades required: Projectors, Computers, Wireless microphones added to rooms with a capacity greater than 70 people (7 rooms)

Costs:

Equipment	Quantity	Unit Price	Total
Lenovo M-91 Computer w/Bluray drive	115	\$1,500.00	\$172,500.00
Smart Podium 500 Series 24" Monitor	115	\$2,500.00	\$287,500.00
NEC 500U Projector (1920x1080 resolution)	115	\$4,000.00	\$460,000.00
TOA Wireless Microphones	7	\$700.00	\$4,900.00
	Total:		\$920,000.00

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Conversion to Fast Track Room Style

Number of Rooms Affected: 107

Upgrades include: Installation of new small form podium, digital cabling, NEC 500U projector (1920x1080 resolution), electric screen, AMX DVX-2100 Controller, AMX 5" Touchpanel, Document camera, Smart Podium Display, Extron USB switcher, Smart GoWire, Smart Podium Mount

Equipment being reused: Cisco 8 port switch, Speakers, Wireless Microphones

Equipment	Unit Price
Smart Podium 500 Series 24" Monitor	\$2,500.00
Smart GoWire	\$450.00
Middle Atlantic Exact 20RU Rack Cart	\$850.00
Elmo P10 Digital Projector	\$1,800.00
NEC PA500U Projector	\$4,000.00
AMX DVX-2100 Enova Controller	\$4,800.00
AMX NXD-500i 5" Modero Touch Panel	\$1,750.00
Chief Flat Panel Power Filter Kit	\$200.00
Extron SW USB Two Input USB Switcher	\$450.00
Innovative 7500 Series Monitor Mount	\$300.00
Draper Targa Projection Screen	\$1,200.00
Cat-6 Cable installation	\$600.00
Extron 301 DTP DVI Tx/Rx	\$800.00
Extron AAP Patch Panel with RCA, HDMI, VGA, USB & XLR Inputs	\$400.00
Equipment Cost Per Room:	\$20,100.00

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Single Projection Lecture Theatres:

Number of Rooms Affected: 8

Upgrades Required: Projector (1920x1080 resolution), Electric Screen, AMX DVX-3150HD Controller, AMX 7" Touchpanel, Smart Podium Display, SMART GoWire, Extron USB Switcher, Computer

Equipment being reused: Cisco 8 port switch, Speakers, Wireless Microphones, Podiums

Scope: Identified rooms would have their existing equipment removed. Infrastructure changes would then be performed as needed, old cabling would be removed or abandoned as needed, New CAT-6 cabling installed from podium to the projector, New equipment installed in existing racks.

Costs:

Equipment	Unit Price
Electric Podium Lift	\$1,200.00
AMX 7" 700 Modero Touch Panel	\$3,000.00
AMX DVX-3150HD Controller	\$8,000.00
Sanyo PDGDHT8000L Projector	\$12,000.00
Sanyo Projector Lense	\$4,000.00
Extron SW2 USB Switcher	\$400.00
Smart Podium 500 Series 24" Monitor	\$2,500.00
Chief Flat Panel Power Filter	\$200.00
Innovative 7500 Series Monitor Mount	\$300.00
Smart GoWire	\$450.00
Screen	\$1,200.00
Elmo P10 Document Camera	\$1,800.00
Extron AAP Patch Panel with RCA, HDMI, VGA, USB & XLR Inputs	\$400.00
Extron 301 DTP HDMI Tx/Rx HDMI over CAT6 Extender	\$800.00
Extron SMB 104 4 gang surface mount box	\$200.00
Cat-6 Cable installation	\$600.00

Equipment Cost Per Room: \$37,050.00

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Dual Projection Lecture Theatres:

Number of Rooms Affected: 26

Upgrades Required: Projector (1920x1080 resolution), Electric Screen, AMX DVX-3150HD Controller, AMX 7" Touchpanel, Smart Podium Display, SMART GoWire, Extron USB Switcher, Computer

Equipment being reused: Cisco 8 port switch, Speakers, Wireless Microphones, Podiums

Scope: Rooms to be converted to dual projection with dual document cameras. This is the same style that is being used in the CCIS lecture theatres.

Costs:

Equipment	Unit Price
Electric Podium Lift	\$1,200.00
AMX 7" 700 Modero Touch Panel	\$3,000.00
AMX DVX-3150HD Controller	\$8,000.00
Sanyo PDGDHT8000L Projector	\$12,000.00
Sanyo Projector Lense	\$4,000.00
Cat-6 Cable installation	\$600.00
Extron SW2 USB Switcher	\$400.00
Smart Podium 500 Series 24" Monitor	\$2,500.00
Chief Flat Panel Power Filter	\$200.00
Innovative 7500 Series Monitor Mount	\$300.00
Smart GoWire	\$450.00
Screen	\$1,200.00
Elmo P10 Document Camera	\$1,800.00
Extron AAP Patch Panel with RCA, HDMI, VGA & XLR Inputs	\$300.00
Extron 301 DTP HDMI Tx/Rx HDMI over CAT6 Extender	\$800.00
Extron SMB 104 4 gang surface mount box	\$200.00
Equipment Cost Per Room:	\$56,550.00

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Videoconference Lecture Theatres:

Number of Rooms Affected: 26

Upgrades Required: 2x Projector (1920x1080 resolution), 2x Electric Screen, AMX DVX-3150HD Controller, AMX 7" Touchpanel, Smart Podium Display, SMART GoWire, Extron USB Switcher, Computer

Equipment being reused: Cisco 8 port switch, Speakers, Wireless Microphones, Podiums

Scope: These rooms differ from application to application so the equipment listing will change from room to room depending on size and need.

Costs:

Equipment	Unit Price
Electric Podium Lift	\$1,200.00
AMX 7" 700 Modero Touch Panel	\$3,000.00
AMX DVX-3150HD Controller	\$8,000.00
NEC PA500U Projector	\$4,000.00
NE 46" Monitors	\$2,700.00
NEC 70" LCD Monitors	\$15,000.00
Sanyo PDGDHT8000L Projector	\$12,000.00
Sanyo Projector Lense	\$4,000.00
Cat-6 Cable installation	\$600.00
Extron SW2 USB Switcher	\$400.00
Smart Podium 500 Series 24" Monitor	\$2,500.00
Chief Flat Panel Power Filter	\$200.00
Innovative 7500 Series Monitor Mount	\$300.00
Smart GoWire	\$450.00
Screen	\$1,200.00
Elmo P10 Document Camera	\$1,800.00
Extron AAP Patch Panel with RCA, HDMI, VGA & XLR Inputs	\$300.00
Extron 301 DTP HDMI Tx/Rx HDMI over CAT6 Extender	\$800.00
Extron SMB 104 4 gang surface mount box	\$200.00
Polycom HDX 7000 720p w/3 year service contract	\$13,000.00

Average Equipment Cost Per Room: \$74,950.00

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ECHA Seminar Rooms:

Number of Rooms Affected: 50

Upgrades include: Digital cabling, NEC 46" LCD Screen, AMX DVX-2100 Controller, AMX 5" Touchpanel, Document camera, Smart Podium Display, Extron USB switcher, Smart GoWire, Smart Podium Mount

Equipment being reused: Cisco 8 port switch, Speakers, Podiums

Costs:

Equipment	Unit Price
Smart Podium 500 Series 24" Monitor	\$2,500.00
Smart GoWire	\$450.00
Innovative 7500 Series Monitor Mount	\$300.00
Extron AAP Patch Panel with RCA, HDMI, VGA, USB & XLR Inputs	\$400.00
AMX DVX-2100 Enova Controller	\$4,800.00
AMX NXD-500i 5" Modero Touch Panel	\$1,750.00
Extron SW2 USB Switcher	\$400.00
NEC 46" Display	\$4,000.00

Equipment Cost Per Room: \$14,600.00

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Breakdown of Costs Year by Year

2012 Fiscal Year:

Total Equipment Costs: \$1,237,200

Digital Upgrades (39):

Business: 1-5, 1-6, 1-9, 1-10, 2-05, 2-9, 3-5, 3-6, 3-10, 4-5, 4-9, 4-13, B-5, B-9

Earth Sciences: 131, 133, 235, 236, 327

FAB: 220

Tory: 1-91, 1-93, 1-103, 2-99, B-45, B-70, B-87, B-95

Tory Lecture: TL-11, TL-12, TL-B1, TL-B2

Law: 101, 105, 193, 197, 201, 207, 231, 237

Cost:

Conversion of 26 Rooms to Fast Track Style: \$522,600

Conversion of 7 Rooms to Single Projection: \$259,350

Conversion of 6 Rooms to Dual Projection: \$339,300

Upgrade of One Videoconferencing Room: \$74,950

New Construction (1):

Law 113

Cost: \$41,000

Other:

Replace remaining MT-1065 projectors with NP-3250s pulled from these rooms (approx. 4 rooms)

Cost: No cost, reusing equipment

2013 Fiscal Year:

Total Equipment Costs: \$1,305,800

Digital Upgrades (45):

Medical Sciences: 227, 231

KATZ: 1080

Corbett Hall: 2-07, 2-39, 2-41, 3-26

Clinical Science: 2-115, 2-117

Humanities: 1-7, 1-11, 2-7, 2-11, 2-25, 2-26, 2-29, 2-30, 2-33, 2-34, 2-37, 2-38, L1, L1-02, L1-10, L2, L3, L4

Education North: 2-115, 2-135

Education South: 1-06, 1-07, 1-28, 1-29, 1-58, 1-65, 1-70, 2-54, 3-77

TELUS: 1-34, 1-45, 1-50, 2-17, 2-19, 2-36, 2-38

Cost:

Conversion of 35 Rooms to Fast Track Style: \$703,500

Conversion of 8 Rooms to Dual Projection: \$452,400

Upgrade of 2 Videoconferencing Room: \$149,900

2014 Fiscal Year:

Total Equipment Costs: \$1,736,800

Digital Upgrades (36):

Ag/For: 113

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ETLC: 1-001, 1-003, 1-007, 1-008, 1-013, 1-017, 1-018, 2-001, 2-002
NREF: 1-001, 1-003, 1-143, 2-001, 2-003, 2-016, 2-020, 2-090, 2-127
GSB: 211, 511, 553, 559, 859
Mech Eng: 2-1, 2-3
Bio Sciences: M1-45, M1-49
Van Vliet: E-120, E-121, E-126, W-01
Comp Sciences: B-02, B-10, B-41, B-43

Cost:

Conversion of 24 Rooms to Fast Track Style: \$703,500
Conversion of 11 Rooms to Dual Projection: \$452,400
Upgrade of 1 Videoconferencing Room: \$149,900

Fast Track Projector Renewal (85):

Humanites: 1-3, 1-15, 2-12, 2-14, 2-15, 2-21, 2-22, 2-41, 2-42
Tory: 1-5, 1-100, 1-104, 1-105, 1-107, 1-108, 1-113, 1-119, 1-125, 1-129, 1-83, 1-90, 1-96, 3-65,
B-5, B-100, B-104, B-105, B-108, B-109, B-113, B-117, B-121, B-125, B-129, B-38, B-60, B-65,
B-76, B-81, B-90, B-96
Education North: 1126, 1128, 1130, 2101, 2117, 2145, 2147, 2149, 2151
Education South: 113, 164, 176, 177, 206, 213, 221, 228, 255, 262, 265, 276, 277, 303, 306,
315, 327, 380, B-18, B-19, B-76, B-77, G-208
GSB: 711, 811
Mech Eng: 3-1, 4-1, 4-3
Bio Sciences: M-137, M-141, M-229, B-105, B-121, G-110, G-114, G-116

Cost: \$557,400

2015 Fiscal Year:

Total Equipment Costs: \$1,522,400

Digital Upgrades (22):

Arts: 141
CAB: 235, 239, 243, 265
CEB: 321, 325, 326, 331, 336, 436
Chemistry: E-160
V Wing: 102, 103
CCIS NLT: L1-440, L1-430
CCIS: 1-140, 1-160, L1-140, L1-160, L2-190, L2-200

Cost:

Conversion of 12 Rooms to Fast Track Style: \$241,200
Conversion of 1 Rooms to Single Projection: \$37,050
Conversion of 1 Rooms to Dual Projection: \$56,550
Upgrade of 8 Videoconferencing Room: \$599,600

Fast Track Projector Upgrades (12):

CAB: 229, 269, 273, 281, 357, 365, 369, 373, 377
Chemistry: E-436, E-536, W-446
Cost: \$78,000

Computer Renewal: 340 Rooms

Cost: \$510,000

2016 Fiscal Year:

Total Equipment Costs: \$1,817,900

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Digital Upgrades (68):
ECHA

Cost:
Conversion of 18 Rooms to Dual Projection: \$1,017,900
Upgrade of 50 Seminar Room: \$730,000
Upgrade of 3 Videoconferencing Codecs: \$39,000

Fast Track Smart Board Upgrades:
Education North: 2119, 2121, 2123, 2137, 2139
Education South: 433A, 451A
Humanities: 217, 219, 378, 386, 442, 478, 496
Cost: \$70,000

Business Zone Projector Upgrades (100)
26 NEC PA500U Projectors @ \$4000.00 each
20 Sanyo @ \$16,000 each
Cost: \$424,000