#### COMMISSION FOR HIGHER EDUCATION

Friday, June 10, 2011

#### **DECISION ITEM A-2:**

Certificate, Technical Certificate, and Associate of Applied Science in Heating, Ventilation, and Air Conditioning To Be Offered by Ivy Tech Community College at Valparaiso, South Bend, Fort Wayne, Lafayette, Kokomo, Muncie, Terre Haute, Indianapolis, Evansville, and Bloomington

## **Staff Recommendation**

That the Commission for Higher Education approve the Certificate, Technical Certificate (T.C.), and Associate of Applied Science (A.A.S.) in Heating, Ventilation, and Air Conditioning (HVAC) to be offered by Ivy Tech Community College at Valparaiso, South Bend, Fort Wayne, Lafayette, Kokomo, Muncie, Terre Haute, Indianapolis, Evansville, and Bloomington, in accordance with the background discussion in this agenda item and the *Abstract*, May 27, 2011; and

That the Commission recommend no new state funds, in accordance with the supporting document, *New Academic Degree Program Proposal Summary*, May 27, 2011

**Background** 

Ivy Tech Community College currently offers several options for students who want to pursue career opportunities in Heating, Ventilation, and Air Conditioning (HVAC). At the certificate level, students have three options: (1) an 18-hour Certificate in Industrial Technology with a concentration in Heating and Air Conditioning; (2) a 31-35-hour Technical Certificate in Industrial Technology with a concentration in HVAC; and (3) a 34-36-hour Technical Certificate in Construction Technology with an HVAC concentration. At the associate degree level, students can pursue up to 18 hours of HVAC coursework as part of either an A.A.S. in Industrial Technology or an A.A.S. in Construction Technology.

The proposed program, which utilizes existing courses and adds a capstone course, will allow students to earn an A.A.S. in the field of HVAC itself, with more courses in that field, rather than simply taking fewer elective courses as part of an associate degree in Industrial Technology or Construction Technology. The Certificate program builds toward the Technical Certificate, which in turn builds toward the A.A.S.

In FY2010 – statewide and combining the certificate and associate programs – Ivy Tech enrolled 2,094 headcount

students in Industrial Technology and 972 headcount students in Construction Technology.

# **Supporting Documents**

- (1) Abstract Certificate, Technical Certificate, and Associate of Applied Science in Heating, Ventilation, and Air Conditioning to be offered by Ivy Tech Community College at Valparaiso, South Bend, Fort Wayne, Lafayette, Kokomo, Muncie, Terre Haute, Indianapolis, Evansville, and Bloomington, May 27, 2011
- (2) New Academic Degree Program Proposal Summary Cert., T.C., and A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

#### **Abstract**

Certificate, Technical Certificate, and Associate of Applied Science in Heating, Ventilation, and Air Conditioning to be offered by

Ivy Tech Community College at Valparaiso, South Bend, Fort Wayne, Lafayette, Kokomo, Muncie, Terre Haute, Indianapolis, Evansville, and Bloomington

May 27, 2011

**Objectives:** To prepare students to become qualified technicians in all aspects of residential and light commercial heating, cooling, and refrigeration systems.

*Clientele to be Served:* Traditional students, both full and part time, who are recent high school graduates; and non-traditional adult students who are underemployed or preparing to enter/re-enter the workforce.

**Curriculum:** Required semester credit hours for each program level are as follows:

# ASSOCIATE OF APPLIED SCIENCE (63-66 credits)

## General Education Core (20-24 credits)

- Fundamentals of Public Speaking (3)
- English Composition (3)
- Life Skills Elective (1-3)
- Geometry/Trigonometry (3)
- Science of Traditional and Alternative Energy (4)
- Humanities or Social and Behavioral Sciences (3)
- Sciences Elective (3-4)

#### Professional/Technical Core (25 credits)

- Computer Fundamentals for Technology (3)
- Construction Blueprint Reading (3)
- Electrical Basics (3)
- Heating Fundamentals (3)
- Refrigeration I & II (6)
- Electrical Circuits & Controls (3)
- Heating Service (3)
- HVAC Capstone (1)

Statewide Electives (18 credits)

## TECHNICAL CERTIFICATE (31-33 credits)

## General Education Core (7-9 credits)

- Fundamentals of Public Speaking (3)
- Life Skills Elective (1-3)
- Geometry/Trigonometry (3)

# Professional/Technical Core (24 credits)

- Computer Fundamentals for Technology (3)
- Construction Blueprint Reading (3)
- Electrical Basics (3)
- Heating Fundamentals (3)
- Refrigeration I & II (6)
- Electrical Circuits & Controls (3)
- Heating Service (3)

#### HVAC CERTIFICATE (18 credits)

#### Professional/Technical Core (18 credits)

- Electrical Basics (3)
- Heating Fundamentals (3)
- Refrigeration I & II (6)
- Electrical Circuits & Controls (3)
- Heat Pump Systems (3)
- Heating Service (3)

**Employment Possibilities:** Graduates will be able to work in a variety of settings including self-employed/private practice and for area employers. These positions include those in which the student will plan, design, install, and operate building ventilation, heating, and air conditioning systems. In addition, these courses can also be very useful to design engineers, plant managers, contractors, and architects.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Valparaiso

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1 FY2012	Year 2 FY2013	Year 3 FY2014	Year 4 FY2015	Year 5 FY2016
Enrollment Projections (Headcount)					
Full-Time	12	19	23	24	24
Part-Time	16	26	31	32	32
Total	28	45	54	56	56
Enrollment Projections (FTE)					
Full-Time	12	19	23	24	24
Part-Time	8	12	15	15	15
Total	20	31	38	39	39
Degree Completions Projection	0	0	2	7	13
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-
Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 10040 County: Porter

II.

Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-South Bend

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1 FY2012	Year 2 FY2013	Year 3 FY2014	Year 4 FY2015	Year 5 FY2016
Enrollment Projections (Headcount)					
Full-Time	12	19	23	24	24
Part-Time	15	24	29	30	30
Total	27	43	52	54	54
Enrollment Projections (FTE)					
Full-Time	12	19	23	24	24
Part-Time	7	11	14	14	14
Total	19	30	37	38	38
Degree Completions Projection	0	0	2	7	13
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-
II. Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 8423 County: St. Joseph

Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Fort Wayne

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1 FY2012	Year 2 FY2013	Year 3 FY2014	Year 4 FY2015	Year 5 FY2016
Enrollment Projections (Headcount)					
Full-Time	18	29	35	37	37
Part-Time	24	38	46	49	49
Total	42	67	81	85	85
Enrollment Projections (FTE)					
Full-Time	18	29	35	37	37
Part-Time	11	18	22	23	23
Total	29	47	57	60	60
Degree Completions Projection	0	0	4	10	20
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-
Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 9926 County: Allen

II.

Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

# I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Lafayette

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1 FY2012	Year 2 FY2013	Year 3 FY2014	Year 4 FY2015	Year 5 FY2016
Enrollment Projections (Headcount)					
Full-Time	12	19	23	24	24
Part-Time	15	24	29	30	30
Total	27	43	52	54	54
Enrollment Projections (FTE)					
Full-Time	12	19	23	24	24
Part-Time	7	11	14	14	14
Total	19	30	37	38	38
Degree Completions Projection	0	0	2	7	13
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-
Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 10039 County: Tippecanoe

II.

Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Kokomo

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1	Year 2	Year 3	Year 4	Year 5
	FY2012	FY2013	FY2014	FY2015	FY2016
Enrollment Projections (Headcount)					
Full-Time	16	26	31	32	32
Part-Time	15	24	29	30	30
Total	31	50	60	62	62
Enrollment Projections (FTE)					
Full-Time	16	26	31	33	33
Part-Time	7	11	14	14	14
Total	23	37	45	47	47
Degree Completions Projection	0	0	3	8	15
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-
II. Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 10041 County: Howard

Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Muncie

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1 FY2012	Year 2 FY2013	Year 3 FY2014	Year 4 FY2015	Year 5 FY2016
Enrollment Projections (Headcount)					
Full-Time	10	16	19	20	20
Part-Time	14	22	27	28	28
Total	24	38	46	48	48
Enrollment Projections (FTE)					
Full-Time	10	16	19	20	20
Part-Time	7	11	13	13	13
Total	17	27	32	33	33
Degree Completions Projection	0	0	2	6	12
New State Funds Requested (Actual) *		-0-	-0-	-0-	-0-
New State Funds Requested (Increases		-0-	-0-	-0-	-0-
II. Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 9924 County: Delaware

Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Terre Haute

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1	Year 2	Year 3	Year 4	Year 5
	FY2012	FY2013	FY2014	FY2015	FY2016
Enrollment Projections (Headcount)					
Full-Time	14	22	27	28	28
Part-Time	14	22	27	28	28
Total	28	44	54	56	56
Enrollment Projections (FTE)					
Full-Time	14	22	27	28	28
Part-Time	7	11	13	13	13
Total	21	33	40	41	41
Degree Completions Projection	0	0	3	7	13
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-
II. Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 8547 County: Vigo

Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Indianapolis

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

Enrollment Projections (Headcount)         18         29         35         37         37	
Part-Time 20 32 39 41 41	
Total 38 61 74 78 78	
Enrollment Projections (FTE)	
Full-Time 18 29 35 37 37	
Part-Time 9 15 18 19 19	
Total <u>27</u> <u>44</u> <u>44</u> <u>56</u> <u>56</u>	
Degree Completions Projection 0 0 4 9 18	
New State Funds Requested (Actual) * -00000-	
New State Funds Requested (Increases) * -00000-	
. Prepared by CHE	
New State Funds To Be Considered	
For Recommendation (Actual) *	
New State Funds To Be Considered	
For Recommendation (Increases) *	

CHE Code: 11-16 Campus Code: 9917 County: Marion

II.

Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Evansville

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1	Year 2	Year 3	Year 4	Year 5
	FY2012	FY2013	FY2014	FY2015	FY2016
Enrollment Projections (Headcount)					
Full-Time	12	19	23	24	24
Part-Time	15	24	29	30	30
Total	27	43	52	54	54
Enrollment Projections (FTE)					
Full-Time	12	19	23	24	24
Part-Time	7	11	14	14	14
Total	19	30	37	38	38
Degree Completions Projection	0	0	2	7	13
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-
II. Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 9925 County: Vanderburgh Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

## I. Prepared by Institution

Institution/Location: Ivy Tech Community College-Bloomington

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1	Year 2	Year 3	Year 4	Year 5
	FY2012	FY2013	FY2014	FY2015	FY2016
Enrollment Projections (Headcount)					
Full-Time	12	19	23	24	24
Part-Time	14	22	27	28	28
Total	26	41	50	52	52
Enrollment Projections (FTE)					
Full-Time	12	19	23	24	24
Part-Time	7	11	13	13	13
Total	19	30	36	37	37
Degree Completions Projection	0	0	2	6	12
New State Funds Requested (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds Requested (Increases) *	-0-	-0-	-0-	-0-	-0-
II. Prepared by CHE					
New State Funds To Be Considered For Recommendation (Actual) *	-0-	-0-	-0-	-0-	-0-
New State Funds To Be Considered For Recommendation (Increases) *	-0-	-0-	-0-	-0-	-0-

CHE Code: 11-16 Campus Code: 35213 County: Bartholomew Degree Level: 02, 03, and 04

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.

May 27, 2011

# I. Prepared by Institution

Institution/Location: Ivy Tech Community College-All Campuses

Program: Cert./T.C./A.A.S. in Heating, Ventilation, and Air Conditioning (HVAC)

	Year 1 FY2012	Year 2 FY2013	Year 3 FY2014	Year 4 FY2015	Year 5 FY2016
	F 1 2012	F 1 2013	F 1 2014	F 1 2015	F 1 2010
Enrollment Projections (Headcoun	t)				
Full-Time	136	197	262	274	250
Part-Time	146	218	313	326	326
Total	282	415	575	600	576
Enrollment Projections (FTE)					
Full-Time	136	217	262	245	275
Part-Time	67	92	150	152	152
Total	203	309	412	397	427
Degree Completions Projection	0	0	26	74	142
New State Funds Requested (Actu	al) *	-0-	-0-	-0-	-0-
New State Funds Requested (Incre	ases) *	-0-	-0-	-0-	-0-
II. Prepared by CHE					
New State Funds To Be Considere For Recommendation (Actual) *	d 	-0-	-0-	-0-	-0-
New State Funds To Be Considere For Recommendation (Increases		-0-	-0-	-0-	-0-

<sup>\*</sup> Excludes new state dollars that may be provided through enrollment change funding.