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MEMORANDUM

To: Mr. Ken Wingate, Chair, and Members, S.C. Commission on Higher Education

From: Dr. Bettie Rose Horne, Chairman, and Members, Committee on Academic Affairs and Licensing

**Consideration of Request for Initial License to Recruit SC Residents
Advanced Technology Institute, L.L.C., Virginia Beach, VA
A.O.S., Automotive Technology with Service Management; Heating, Ventilation, and Air
Conditioning (HVAC) with Service Management; Heavy Equipment Technology with Service
Management; and Maritime Welding Technology with Service Management**

Summary

Advanced Technology Institute (ATI) (<http://www.auto.edu/>) of Virginia Beach, Virginia, requests approval to recruit South Carolina residents into on-ground programs leading to the Associate in Occupational Science (A.O.S.) degree in Automotive Technology with Service Management; Heating, Ventilation, and Air Conditioning (HVAC) with Service Management; Heavy Equipment Technology with Service Management; and Maritime Welding Technology with Service Management. All of the programs are offered at the campus in Virginia Beach. The proposal is to begin soliciting immediately upon approval by the Commission.

Advanced Technology Institute (ATI) is a private, for-profit institution, owned by Advanced Technology Institute, L.C.; Mark B. Dreyfus is the primary shareholder. The Dreyfus family also owns ECPI University. The Southern Association of Colleges and Schools accredits ECPI's network of institutions, including the three branches in South Carolina. The Accrediting Commission of Career Schools and Colleges (ACCSC) has accredited ATI since 1995. It began offering non-degree programs in 1975 and, in March 2004, the State Council of Higher Education for Virginia (SCHEV) and ACCSC approved ATI as a two-year degree-granting institution.

The following information from the U.S. Department of Education shows student loan default rates at ATI:

School	Type	PRGMS		FY2009	FY2008	FY2007
Advanced Technology Institute Virginia Beach VA	Associate's Degree	Federal Family Education Loans and Federal Direct Loans (FFEL/FDL)	Default Rate	11%	10.5%	7.9%
			No. in Default	37	43	29
			No. in Repay	334	407	367
Enrollment (Students enrolled at any time during the year)				1,051	1,165	1,114
Cohort Default Rate (Percentage)				31.8%	34.9%	32.9%

To provide context for the Cohort Default Rate (CDR), USDE includes enrollment data (students enrolled at any time during the year) and a corresponding percentage (borrowers entering repayment divided by that enrollment figure). While there is no direct relationship between the timing of when a borrower entered repayment (October 1 through September 30) and any particular enrollment year, these data are for the academic year ending on the June 30 prior to the beginning of the cohort year (e.g., FY 2009 CDR Year uses 2007-2008 enrollment).

The U. S. Department of Education sanctions a school when the school's three most recent cohort default rates are 25 percent or higher or if a school's current default rate is greater than 40 percent. Except in the event of a successful adjustment or appeal, such a school will lose FFEL, Direct Loan, and Federal Pell Grant program eligibility for the remainder of the fiscal year in which the school is notified of its sanction and for the following two fiscal years.

The school's facilities consist of six buildings in three locations. The 31,161 square foot primary campus, 5700 Southern Boulevard, Virginia Beach, consists of three buildings that house offices, academic programs, seven classrooms, a student resource center, and an 18,400 square foot shop. A second 23,000 square foot location, 1429 Miller Store Road, Virginia Beach, houses offices, nine classrooms, a student resource center, and shops for the HVAC and automotive programs. Also, adjacent to the 1429 address a second building at 1441 Miller Store Road, includes 23,000 square feet with three classrooms and a 19,000 square foot shop. A 10,000 square foot third location, Scott Street, Norfolk, houses the tractor trailer training program with a lot to allow maneuvering of four tractors and trailers simultaneously. The heavy vehicle building consists of 17,400 square feet which includes a student break area, administrative space, six classrooms, a fuel lab, and 13,000 square feet of shop for welding and heavy equipment. The shop space ranges from 100 to 315 square feet per student. The laboratories and shops are similar to many in which graduates will find employment. Classrooms have audio-visual equipment, Internet, and access to the school's library of multimedia resources.

Each site includes a student resource center that provides computer workstations, printer, and carrels with study tables and chairs. Shelving houses an archive of industry publications, certification study materials, a periodicals display, as well as local area social services materials. Learning resource materials unique to each program are maintained within each department. In addition, ATI provides its students access to learning through an agreement with ECPI University, also located in Virginia Beach. Students have use of book and periodical materials, reference assistance, and access to the electronic resources from the online library databases, e-books, interlibrary loan services. The agreement also provides access to classroom and computer laboratory facilities. ECPI's main-campus library houses a collection of over 10,000 items, a computer lab, media services area, conference room, study carrels and tables, periodicals area, a coffee-study lounge, and centers for writing assistance, math assistance, and testing. The library is wireless and students may use laptops or check out the library MacBooks for in-house use. All new students receive a required orientation to the ECPI library and the ECPI Online Library website at <http://ecpilibrary.sirsi.net>.

The ATI campus director reports to the president. Directors of admissions, education, management information, student services, and financial aid report to the campus director. Program coordinators are responsible for oversight and report to the director of their respective programs. Faculty members who teach technical courses must have appropriate qualifications, typically an associate's degree in the field, although the minimum background is five years of technical experience. Faculty members who teach general education courses must have completed at least 18 graduate semester hours in the teaching discipline and hold a master's degree with a major in the teaching discipline.

Currently, 10 South Carolina residents are enrolled in ATI. Institution officials project that, after approval by the Commission to advertise in the State, it will enroll approximately 17 more South Carolina residents.

The following table shows the tuition, credit hours, loan debt, graduation rate, and placement rate by discipline.

Discipline	Tuition Per Quarter Credit Hour	Associate Degree Total Semester Credit Hours	Total Tuition	Median Federal Loan Debt	Graduation Rate	Placement Rate
Automotive Technology with Service Management	\$420	75	\$31,500	\$15,132	67%	85%
Heavy Vehicle Technology with Service Management	\$420	75	\$31,500	\$13,822	77%	80%
Heating, Ventilation, and Air Conditioning with Service Management	\$420	75	\$31,500	\$0 ¹	75%	72%
Welding Technology with Service Management	\$444	70	\$31,080	\$21,090	Not yet calculable	Net yet calculable

For admission to ATI, applicants must have a high school diploma or equivalent and score at least 11 on the Wonderlic Cognitive Ability Test. Developed by Eldon F. Wonderlic, the test is used to assess aptitude for learning and problem-solving in a range of occupations. It consists of 50 multiple choice questions to be answered in 12 minutes. A score of at least 10 points suggests a person is literate.

The following provides a brief description of each program, information about specialized programmatic accreditation, practitioner licensure, U. S. Bureau of Labor Statistics data where appropriate, and similar programs offered by other institutions in the state.

A.O.S., Heating, Ventilation, and Air Conditioning (HVAC) with Service Management

The program leading to the A.O.S. degree in Heating, Ventilation, and Air Conditioning (HVAC) is designed to give practical knowledge and experience in the classroom and shop using modern test equipment and tools. The program prepares graduates for entry-level employment in the HVAC industry. The service management component of the curriculum provides a foundation in business management, customer service, communications, employee relations, inventory management, and business finance.

¹ Students in this program are typically veterans who use their education benefits instead of borrowing.

The U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook (OOH) 2012-13 Edition* lists Heating, Air Conditioning, and Refrigeration Mechanics and Installers 2010 median pay at \$20.45 per hour, entry-level education as a postsecondary non-degree award, and projected job growth much faster than average for all occupations. The BLS listing also says that a growing number of technicians receive six months to two years of training that lead to a certificate or associate's degree. Technicians may also learn the trade on the job or through a formal apprenticeship that normally last three to five years.

The U.S. Environment Protection Agency (EPA), under provisions of Section 608 of the Federal Clean Air Act, requires technicians who buy or work with refrigerants to be certified in proper refrigerant handling. Traditionally, fluorocarbons, especially chlorofluorocarbons, were used as refrigerants (most widely known as R-22), but are to be phased out by 2020 because of their ozone depletion effects. Also, air conditioning equipment manufactured for non-fluorocarbon require contractors and technicians to shift to different tools, equipment and safety standards when installing or changing out older split air conditioning systems and repairing systems in the field. The ATI program includes training and certification with the use of R-410A, a replacement for the traditional refrigerants. Students must pass a series of Esco Institute examinations for certification.

A.O.S., Heating, Ventilation, and Air Conditioning Technology with Service Management			
Course Number	Course Name	Clock Hours	Credit Hours
ORN100	Fundamentals of Technology	100	5
HVA101	Introduction to Computers, Safety, and Principles of Air Conditioning	100	5
HVA102	Basic Electricity and Circuits	100	5
HVA103	Intermediate Electricity & Schematics	100	5
HVA104	Pipe Brazing/Ducting & Air Movement	100	5
HVA105	Heating Systems	100	5
HVA106	Domestic/Commercial Refrigeration	100	5
HVA207	Air Conditioners	100	5
HVA208	Heat Pumps / All Weather Systems	100	5
HVA209	Sheet Metal Fabrication	100	5
HVA210	Direct Digital Controls	100	5
COM210	Principles of Speech	50	3
ENG255	Technical Writing	50	3
PSY151	Occupational Health and Safety	50	3
PSY207	Industrial Psychology	50	3
SM210	Service Management I	50	2
SM220	Service Management II	50	2
SM230	Service Management III	50	2
SM240	Service Management IV	50	2
	Totals	1,500	75

Florence-Darlington, Midlands, Piedmont, and Tri-County technical colleges offer programs leading to associate's degrees in heat, ventilation, air-conditioning, and refrigeration. In addition for-profit Centura College, Air-Conditioning Refrigeration Training Center, and

Fortis College offer HVACR certificate programs. The Commission also licenses Lincoln College of Technology (formerly Nashville Auto-Diesel College), Universal Technical Institute, and WyoTech a/k/a Wyoming Technical Institute to recruit SC residents into programs leading to non-degree certificates or diplomas or associate's degrees.

A.O.S., Automotive Technology with Service Management

The program leading to the A.O.S. degree in Automotive Technology with Service Management offers classroom and laboratory training using modern test equipment and specialized tools. Students gain hands-on experience in a realistic shop environment where they must demonstrate specific proficiencies. Course content provides students with the knowledge and skills required for entry-level employment as automotive repair technicians in an automotive service center. The service management component of the curriculum provides a foundation in business management, customer service, communications, employee relations, inventory management, and business finance.

The U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook (OOH) 2012-13 Edition* lists Automotive Service Technicians and Mechanics 2010 median pay at \$17.21 per hour, entry-level education as a high school diploma or equivalent, and projected job growth as average compared to all occupations. The BLS listing also says that vocational or other postsecondary training is considered the best preparation for entry-level positions and, because automotive technology is becoming increasingly sophisticated, employers prefer service technicians who have completed a formal training program in postsecondary education.

The National Automotive Technician Education Foundation (NATEF) evaluates technician training programs against standards developed by the automotive industry and recommends qualifying programs for NATEF accreditation. In 1998 NATEF granted the initial Master Certification to ATI as a Master Training school for its automotive program. National Automotive Technicians Education Foundation (NATEF) bases training in the practical aspects of automotive maintenance and repair with emphasis on logical diagnostics procedures and effective repair methods. The U.S. Environment Protection Agency (EPA) requires all technicians who buy or work with refrigerants to be certified in proper refrigerant handling. Technicians must pass a written exam specific to servicing small appliances, high-pressure refrigerants, or low-pressure refrigerants. For certification, students must pass the ESCO Institute Section 609 Motor Vehicle Air Conditioning Exam.

A.O.S., Automotive Technology with Service Management			
Course Number	Course Name	Clock Hours	Semester Credit Hours
ORN100	Fundamentals of Technology	100	5
AUT101	Basic Gasoline Engine	100	5
AUT102	Vehicle Electrical & Electronics I	100	5
AUT103	Steering & Alignment	100	5
AUT104	Brakes	100	5
AUT105	Drivelines I	100	5
AUT106	Drivelines II	100	5
AUT207	Vehicle Electrical & Electronics II	100	5
AUT208	Environmental Comfort Systems	100	5
AUT209	Automotive Diagnostics & Fuels	100	5
AUT210	Advanced Diagnostics & Emissions	100	5
COM210	Principles of Speech	50	3
ENG255	Technical Writing	50	3
PSY151	Occupational Health and Safety	50	3
PSY207	Industrial Psychology	50	3
SM210	Service Management I	50	2
SM220	Service Management II	50	2
SM230	Service Management III	50	2
SM240	Service Management IV	50	2
Totals		1,500	75

Florence-Darlington, Greenville, Midlands, Orangeburg-Calhoun, Piedmont, Spartanburg, Tri-County, and York technical colleges offer programs leading to the A.A.S. degree in automotive-technology. Bob Jones University also offers a program leading to the A.A.S. degree in automotive service. Fifteen technical colleges offer certificate programs in automotive specialties.

A.O.S., Heavy Equipment Technology with Service Management

The program leading to the A.O.S. degree in Heavy Vehicle Technology with Service Management offers training in the practical aspects of diesel engine maintenance and major heavy vehicle subsystems. Emphasis is placed on logical diagnostic methods and repair procedures. This program provides graduates with a foundation for entry-level positions as heavy vehicle repair technicians. The service management component of the curriculum provides a foundation in business management, customer service, communications, employee relations, inventory management, and business finance.

The U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook (OOH) 2012-13 Edition* lists Heavy Vehicle and Mobile Equipment Service Technicians' 2010 median pay at \$20.50 per hour, entry-level education as a high school diploma or equivalent, and projected job growth as average compared to all occupations. The BLS listing also says that employers increasingly prefer technicians who have completed formal postsecondary education training.

Some manufacturers offer certification in specific repair methods or equipment. Although not required, certification can demonstrate a mechanic's competence and usually brings higher pay.

A.O.S., Heavy Vehicle Technology with Service Management			
Course Number	Course Name	Clock Hours	Credit Hours
ORN100	Fundamentals of Technology	100	5
HVT101	Introduction to Heavy Vehicle Technology	100	5
HVT102	Vehicle Electrical Systems	100	5
HVT103	Environmental Comfort Systems	100	5
HVT104	Two & Four Cycle Diesel Engines	100	5
HVT105	Diesel Fuel Systems	100	5
HVT106	Advanced Diesel Fuel Systems	100	5
HVT207	Drivelines	100	5
HVT208	Brakes & Suspension	100	5
HVT209	Steering & Alignment	100	5
HVT210	Hydraulic Systems	100	5
COM210	Principles of Speech	50	3
ENG255	Technical Writing	50	3
PSY151	Occupational Health and Safety	50	3
PSY207	Industrial Psychology	50	3
SM210	Service Management I	50	2
SM220	Service Management II	50	2
SM230	Service Management III	50	2
SM240	Service Management IV	50	2
	Total	1500	75

Florence-Darlington, Greenville, and Orangeburg-Calhoun technical colleges offer certificate programs in diesel and/or heavy equipment technologies. Florence Darlington offers a program leading to the A.A.S., Heavy Equipment/Diesel Technology The Commission also licenses Nashville Auto-Diesel College (AAS, automotive and diesel technology), Universal Technical Institute, and WyoTech a/k/a Wyoming Technical Institute to recruit SC residents into certificate programs in automotive/diesel technologies.

A.O.S., Maritime Welding Technology with Service Management

The program leading to the A.O.S. degree in Maritime Welding Technology with Service Management offers training in the practical aspects of construction and repair of equipment and structures built with steel. Students also learn to weld pipe in multiple positions. The program prepares students for entry-level employment as a combination structural and pipe welder. The service management component of the curriculum provides a foundation in business management, customer service, communications, employee relations, inventory management, and business finance.

Welders, cutters, solderers, and brazers typically study blueprints, sketches, or specifications; calculate dimensions to be welded; inspect structures of materials to be welded; ignite torches or start power supplies; monitor the welding process to avoid overheating; smooth and polish all surfaces; and maintain equipment and machinery. Welding is used in shipbuilding, automobile manufacturing, aerospace applications, other manufacturing activities, and construction of buildings, bridges, and other structures.

The U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook (OOH) 2012-13 Edition* lists Welders, Cutters, Solderers, and Brazers 2010 median pay at \$17.04 per hour, entry-level education as a high school diploma or equivalent, and projected job growth as average compared to all occupations. The BLS listing also says that many employers prefer to hire welders who have completed a formal training program in postsecondary education.

Some welding positions require general certification in welding or certification in specific skills, such as inspection or robotic welding. ATI uses American Welding Society (AWS) procedures and tests to determine the skills and abilities of its students so that they are eligible for AWS certification.

A.O.S., Maritime Welding Technology with Service Management			
Co. No.	Course Name	Clock Hours	Credit Hours
MWT111	Intro to Maritime Welding Technology	125	5
MWT112	Shielded Metal Arc Welding (SMAW)	125	5
MWT113	Gas metal Arc Welding (GMAW)	125	5
MWT114	Gas Tungsten Arc Welding (GTAW)	125	5
MWT125	Gas Metal Arc Welding/Flux Cored Arc Welding	125	5
MWT212	Shielded Metal Arc Welding Multi-position (SMAWA)	125	5
MWT214	Gas Tungsten Arc/Gas Metal Arc Welding/Shielded Metal Arc Welding, Pipe 2G, 5G	125	5
MWT215	Shielded Metal Arc Welding (SMAW), Pipe 2G and 5G	125	5
MWT216	Shielded Metal Arc Welding Pipe, 6G	125	5
MWT223	Gas Metal Arc/Gas Tungsten Arc Welding, Aluminum (GMAW-AL)	125	5
COM210	Principles of Speech	50	3
ENG255	Technical Writing	50	3
PSY151	Occupational Health and Safety	50	3
PSY207	Industrial Psychology	50	3
SM210	Service Management I	50	2
SM220	Service Management II	50	2
SM230	Service Management III	50	2
SM240	Service Management IV	50	2
	Totals	1,650	70

Sixteen public technical colleges offer programs leading to diplomas or certificates in welding. In addition private, for-profit Palmetto Training, ArcLabs, and International Diving Institute offer certificate programs in welding.

Recommendation

The Committee on Academic Affairs and Licensing commends favorably to the Commission initial licensure for five years to Advanced Technology Institute to recruit South Carolina residents into programs leading to the A.O.S. degree in Automotive Technology with Service Management; Heating, Ventilation, and Air Conditioning (HVAC) with Service Management; Heavy Equipment Technology with Service Management; and Maritime Welding Technology with Service Management. The institution will begin recruiting immediately upon approval by the Commission.