

Miami Dade College  
Office Associate Provost, Academic Affairs

March 15, 2013

**MEMORANDUM**

**TO:** Rolando Montoya

**FROM:** Michael Reiner

**SUBJECT: APPROVAL OF CURRICULUM REPORT #97**

Attached for your approval is the approved curriculum presented at the March 12, 2013 CASSC meeting. The information in Curriculum Report #97 includes the following items:

**Curriculum Requiring Approval**

1. **School of Engineering & Technology**

- **Program Modification –**  
Database Technology – Microsoft Business Intelligence Option (25071)

2. **School of Aviation**

- **New Program Request –**  
Transportation and Logistics (A.S.)  
Intermodal Freight Transportation (College Credit Certificate)  
International Freight Transportation (College Credit Certificate)
- **New Course Request –**  
TRA1154 Introduction to Supply Chain Management  
TRA1JJJ Introduction to Rail Freight Operations  
TRA1LLL Introduction to Port Freight Operations  
TRA1SSS Introduction to Trucking Operations  
TRA2032 Transportation Public Policy, Law, and Regulations  
TRA2156 Operations Management for Transportation  
TRA2XXX Intermodal Transportation Operations & Project Management  
TRA2945 Transportation & Logistics Capstone I  
TRA2946 Transportation & Logistics Capstone II
- **Course Modification –**  
TRA2702 International Logistics & Transportation

**Informational Item (s)**

3. **General Education Focus Team (GEFT) Updates**

If I can be of further assistance, please do not hesitate to contact me.

Attachment

**Miami Dade College**  
**College-wide CASSC Meeting March 12, 2013**  
**CURRICULUM REPORT #97**

**1. School of Engineering and Technology**

**Program Modification –**

**Program title:** Database Technology - Business Intelligence Program Option  
**Program Code:** 25071  
**Effective Term:** Fall 2013 (2013-1)  
**Degree Type:** Associate in Science  
**Affected Campuses:** 1,2,3,5,6,7,8  
**Program Length:** 63 credit hours

**Executive Summary – Modifications to Program**

**Rationale:**

The School of Engineering+Technology proposes adding a Business Intelligence option to the existing Database Technology Associate in Science degree.

This program option provides students majoring in computer information science disciplines with the knowledge and skills to build business intelligence applications and to manipulate massive amounts of data, turning it into useful information and reports which businesses can use for effective management and marketing.

Business intelligence (BI) has become a mission-critical solution for companies of all sizes. To ensure that owners understand how their company is performing and what they can do to improve performance and address issues. According to Computer Business Review online: *“BI is a broad category of application programs and technologies for gathering, storing, analyzing and providing access to data to help enterprise users make better business decisions. It is often deployed to analyze information captured through such enterprise applications, and is defined as an analytical approach to information captured within an organization, including extracting, collating, analyzing and distributing data, in order to support its operations. Across all enterprise size bands, financial analytics are consistently the most ubiquitous.... Datamonitor expects that the global business intelligence market, which was worth just under \$4 billion in license revenue alone in 2006, will double in value by the end of 2012.”*<sup>1</sup>

**APPROVE** \_\_\_\_\_ **OPPOSE** \_\_\_\_\_ **MORE INFORMATION** \_\_\_\_\_

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<sup>1</sup> Source: Computer Business Review online  
[http://www.cbronline.com/features/demand\\_for\\_business\\_intelligence\\_technology\\_set\\_to\\_soar](http://www.cbronline.com/features/demand_for_business_intelligence_technology_set_to_soar)  
Accessed: September 29, 2010



A.S. Program

**DATABASE TECHNOLOGY - MICROSOFT DATABASE BUSINESS INTELLIGENCE (25071)**

Total credits required for the degree is 63.

Course	Course Title	Credits	Pre-/Co-Requisites
<b><u>LOWER DIVISION REQUIREMENTS</u></b>			
<b><u>General Education:</u></b>			
<b>Communications – 3 Credits Required</b>			
ENC 1101	English Composition 1	3	
<b>Oral Communication – 3 Credits Required</b>			
SPC 1017	Fundamentals of Speech Communications	3	
<b>Humanities – 3 Credits Required</b>			
PHI 2604	Critical Thinking/Ethics	3	Pre-Req ENC 1101
<b>Behavioral and Social Science – 3 Credits Required</b>			
CLP 1006	Psychology of Personal Effectiveness	3	
<b>Mathematics/Natural Science – 3 Credits Required</b>			
<b>Math</b>			
MAC 1105	College Algebra	3	Pre-Req MAT 1033 or placement scores
<b>Computer Competency</b>			
	Computer Competency Test		
	<b>Or</b>		
CGS 1060	Introduction to Microcomputer Usage	4	
<b><u>MAJOR CORE REQUIREMENTS – 8 Credits Required</u></b>			
CGS 1060	Introduction to Microcomputer Usage	4	
CGS 1540	Database Concepts Design	4	Pre-Req CGS1060 or CGS1021 or CCT
<b><u>PROGRAM CORE REQUIREMENTS – 28 Credits Required</u></b>			
COP 1332	Introduction to Visual Basic Programming	4	Pre/Co-Req CGS1060
COP 2333	Advanced Programming Concepts using Visual Basic	4	Pre-Req COP1332
CTS 1437	Microsoft SQL Administration	4	Recommended CGS1540 or CGS1541
CTS 2433	Microsoft SQL Implementation	4	Pre-Req CTS 1437
CTS 2450	Business Intelligence- Data Mining	4	Pre-Req CTS 1437 OR CTS 2433 OR CTS 2451
CTS 2451	Business Intelligence- Integration Services & Reporting	4	Pre-Req CTS 1437
QMB 2100	Basic Business Statistics	3	Co-Req QMB 2100L
QMB 2100L	Basic Statistics Laboratory	1	Co-Req QMB 2100
<b><u>ELECTIVES – 12 Credits Required</u></b>			
ACG 2021	Financial Accounting and Lab	3	Co-Req ACG 2021L
ACG 2021L	Financial Accounting and Lab	1	Co-Req ACG 2021
CGS 2172	Implementing a Commerce-Enabled Web Site	4	Pre-Req COP 2823 or CTS 2463
COP 2823	ASP/Script Language Programming	4	Pre-Req CGS 1060 or COP 1332 or COP 1334
CTS 2361	Microsoft SharePoint Server	4	Pre-Req CTS 1437
CTS 2463	Web Application Development	4	Pre-Req COP 1332 or COP 1334
GEB 1011	Principles of Business	3	
CIS 1949	Co-op Work Experience 1: CIS	1	

\*End of Program Sheet

## 2. School of Aviation

### New Program Request –

<b>Program title:</b>	Transportation & Logistics
<b>Program Code:</b>	Pending State Approval
<b>Effective Term:</b>	Fall 2013 (2013-1)
<b>Degree Type:</b>	Associate in Science
<b>Affected Campuses:</b>	1,2,3,5,6,7,8
<b>Program Length:</b>	64 credit hours



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### TRANSPORTATION & LOGISTICS Associate in Science Degree (A.S.)

#### Statement of Justification

##### 1. Identified business/industry need for the program (letter from industry, AWI, TOL, etc.)

Miami Dade College (MDC) is proposing a 64 credit Associate of Science - Transportation and Logistics (AS-T&L) degree to address the needs for a skilled labor force and the growth of South Florida as a transportation and logistics hub. Logistics is defined as the management and transportation of goods from the point of origin to the point of consumption and the return for reuse. The proposed AS - Transportation and Logistics degree will also include specializations (Intermodal Freight Transportation and International Freight Transportation) by providing one 18-credit hour and one 15-credit hour College Credit Certificate. While the University of North Florida offers a four-year degree in Transportation Management and Broward College was recently approved for a four-year degree in Supply Chain Management, there is currently no AS-T&L degree currently being offered in Florida. The proposed MDC AS degree has been developed in coordination with the MDC School of Business and is designed to articulate into the proposed MDC Bachelor of Applied Science (B.A.S.) with a major in Supply Chain Management and Logistics.

The transportation and logistics industry is critical to the national economy and the topic has been addressed numerous times over the past eleven (11) years.

- In November 2002, the U.S. Federal Highway Administration prepared "The Freight Story, A National Perspective on Enhancing Freight Transportation. This report examined issues affecting the growth of the national freight transportation system and its impact on the economy and the country's global competitiveness. In addition to identifying some needed infrastructure improvements, the report also recognized that future workforce needs had to be addressed. Recommending an increase in freight related curriculum at institutions of higher learning, to support long term workforce needs, the report also noted:

"Educating and training a skilled and knowledgeable workforce are crucial to building and maintaining a productive and competitive freight transportation system."<sup>1</sup>

- In 2008, MDC initiated and prepared a Needs Assessment<sup>2</sup> to determine the viability for an Institute of Intermodal Transportation and a degree program. The study included interviews with transportation industry leaders and reviewed data on employment and growth. The Needs Assessment supported the need for workforce training for local industry involved in freight and passenger movement.
- In December 2010, the Florida Chamber Foundation, in partnership with the Florida Department of Transportation (FDOT), published the Florida Trade and Logistics Study. The Study focused on recommendations to transform the state's economy by becoming a global hub for trade and logistics. The Study reported that trade, logistics and distribution industries employed 531,000 Floridians in 2009 with average wages nearly 30% higher than the average of all industries in the state and jobs in this sector are expected to grow another 18% by 2018.<sup>3</sup>
- In March 2012, the Miami-Dade County's Beacon Council and Economic Development Foundation published the One Community One Goal (OCOG) Targeted Industry Strategic Plan. The purpose of the OCOG Targeted Industry Strategic Plan was to create a plan of action for growing jobs and investment in Miami-Dade County. The trade and logistics industry is one of the seven target industries identified that

<sup>1</sup> U.S. Federal Highway Administration, "The Freight Story, A National Perspective on Enhancing Freight Transportation," November 2002

<sup>2</sup> Miami Dade College, Needs Assessment for an Institute of Intermodal Transportation, July 2008

<sup>3</sup> Florida Chamber Foundation, Florida Trade and Logistics Study, December 2010

would help maximize Miami-Dade County's economic growth. The Plan called for an alignment of education and economic development that "would allow Miami to fill its workforce pipeline from top to bottom."<sup>4</sup>

Transportation and logistics are key economic drivers of Miami-Dade County due to the County's major international airport, cruise and container port, highway, rail, trucking and distribution facilities.

- Over 2 million cargo tons were processed through Miami International Airport (MIA) in 2011.<sup>5</sup> In a 2008 Economic Impact Report, it was stated that MIA supported 278,053 jobs and created over \$12.1 billion of business revenue.<sup>6</sup>
- Port of Miami is one of South Florida's most significant economic generators. Over 7.3 million cargo tons were processed in 2010 and the economic benefit of the Port is \$18 billion annually with over 176,000 direct and indirect jobs.<sup>7</sup> The amount of cargo is expected to grow after the Port of Miami dredge project is complete by 2014 and the Port of Miami will be the only port in the state able to handle the deeper-draft post Panamax ships.
- Florida East Coast Railway partnered with Port of Miami to re-introduce on-port rail service by restoring tracks that will link the Port and the Hialeah Rail Yard with access to the national rail system<sup>8</sup>, creating approximately 2,000 new, permanent jobs.<sup>9</sup>
- The Miami River is a major corridor for freight. In 2006, 557,000 tons of cargo was moved along this waterway with an estimated economic impact in 2004 of \$682.5 million and 6,106 jobs.<sup>10</sup>
- Miami-Dade's freight infrastructure handled over 137 million tons of domestic and international freight in 2010 and this number is forecast to grow to 222 million tons by 2035.<sup>11</sup>

To prepare the curriculum for the proposed AS-T&L degree, industry input was received through personal meetings and DACUM processes held on June 20 and 21, 2011, and November 27, 2012. Industry participants included representatives from the Port of Miami, Miami International Airport, Miami-Dade Transit, the Florida Department of Transportation, MDX Expressway Authority, United Parcel Service (UPS), Miami Dade Metropolitan Planning Organization, Freight Forwarders and Custom Brokers Association, and other businesses involved in transportation and freight movement. The results indicated that transportation and logistics industry businesses supported the development of the proposed AS - Transportation and Logistics degree and affiliated College Credit Certificates. To quote Roger Madan, President of Air Marine Forwarding Company:

"This Program with its' Associate in Science Degree and Professional College Credit Certificates will help... our existing employees and provide a stronger and larger pool of future candidates for employment in the field of transportation. (Appendix 1)"

In a letter of support for the program from the Beacon Council, Frank Nero, President and CEO of the Beacon Council, stated:

"The new Miami-Dade College Transportation and Logistics program follows the recommendations set forth in our One Community One Goal Initiative, to foster a strong local logistics workforce. This program's unique nature and innovative curriculum make it a practical and viable opportunity for both interested students and industry professionals. (Appendix 2)"

<sup>4</sup> Beacon Council One Community One Goal, Report 4, Target Industry Strategies, May 2012

<sup>5</sup> Miami International Airport Monthly Traffic Report December 2011

<sup>6</sup> Miami-Dade Aviation Department, Economic Impact of the Miami-Dade County Airport System, 2008

<sup>7</sup> Port of Miami 2035 Master Plan

<sup>8</sup> Port of Miami website at <http://miamidade.gov/PortMiami/rail-restoration>

<sup>9</sup> Port of Miami Presentation to the Citizens' Transportation Advisory Committee on October 6, 2010.

<sup>10</sup> Southeast Florida Regional Freight Plan, Kimley Horn & Associates, March 2010

<sup>11</sup> Miami-Dade County Metropolitan Planning Organization, Transportation and Economic Impacts of the Freight Industry in Miami Dade, Dec. 7, 2011

Surveys were conducted by the Community College Consulting Group, Inc., with local industry, MDC students, and three local high schools in Miami Dade County (Homestead Senior High, Southridge Senior High, and George T. Baker) and the following results presented to MDC June 20-21, 2011:

- Industry Surveys (completed by individual employed in industry/related positions).
  - 183 surveys received
  - 104 (57%) indicated interest in Intermodal Transportation
  - 66 (36%) indicated interest in a Baccalaureate degree
  - 68 (37%) indicated interest in an Associate of Science (AS) degree
  - 55 (30%) indicated interest in a College Credit Certificate (CCC)
- Student Surveys (MDC students and 3 local high schools in Miami Dade County)
  - 188 surveys received
  - 168 (89%) indicated interest in Intermodal Transportation
  - 89 (47%) indicated interest in a Baccalaureate degree
  - 64 (34%) indicated interest in an Associate of Science (AS) degree
  - 65 (35%) indicated interest in a College Credit Certificate (CCC)

Based on the survey results regarding interest in a baccalaureate program, MDC submitted a Letter of Intent for a proposed a Bachelor of Applied Science (B.A.S.) with a major in Supply Chain Management to the Florida Department of Education as of February 22, 2013. The proposed AS - Transportation and Logistics degree program is designed to articulate into the B.A.S. with a major in Supply Chain Management.

Average hourly wages among the fifteen largest logistics and distribution industry occupations range from a high of \$37.68 for first line supervisors/managers (\$78,374 annually) to a low of \$10.67 for stock clerks and order fillers (\$22,194 annually). Higher wages are found in occupations with greater training requirements. Ten of the fifteen largest logistics and distribution occupations require additional certification beyond a high school diploma, such as postsecondary adult vocational certificate or an associate's degree.<sup>12</sup>

MDC is uniquely positioned to provide students with a quality educational program in transportation and logistics. The College has a strong history of being a leader in workforce training and has an established AS degree in Aviation. With a classroom facility in the air cargo area at Miami International Airport, the proposed AS –T&L degree program will be offered close to companies such as FedEx and UPS and close to Port of Miami, FEC Hialeah Rail Yard, and the Miami Free Trade Zone. Additionally, surrounding these facilities are the many companies and warehouses involved in international trade, logistics and the movement of goods. Finally, with the industry insights provided for the program, the proposed degree program has been designed to successfully train the workforce with skills to meet the growth projected in the transportation and logistics industry.

## 2. Occupations for which the program would train and the corresponding SOC Code(s).

As evidenced in the Bureau of Labor Statistics, the **proposed** occupations for which the program would train students have been identified as:

<u>Occupation</u>	<u>SOC Code</u>
Transportation, Storage and Distribution Managers	11-3071
Logisticians	13-1081
Cargo and Freight Agents	43-5011
Shipping, Receiving and Traffic Clerks	43-5071
Supervisors of Transportation and Material Moving Workers	53-1000
Aircraft Cargo Handling Supervisors	53-1011
First-Line Supervisors of Transportation and Material Moving Machine and Vehicle Operators	53-1031

<sup>12</sup> Florida Agency for Workforce Innovation, Labor Market Statistics Center, Quarterly Census of Employment and Wages Program (QCEW), prepared April 2010. Retrieved from [http://www.eflorida.com/IntelligenceCenter/download/LG/FF\\_Industry\\_Profile.pdf](http://www.eflorida.com/IntelligenceCenter/download/LG/FF_Industry_Profile.pdf)

**3. For new CCC or ATD programs, identify the parent AS/AAS degree program**

Parent A.S. degree program

- Associate in Science – **Transportation & Logistics** (*CIP TBD*) [*Proposed Degree*]
  - College Credit Certificate – **Intermodal Freight Transportation** – 18 Credit Hours (*CIP TBD*) [*Proposed Certificate*]
  - College Credit Certificate – **International Freight Transportation** – 15 Credit Hours (*CIP TBD*) [*Proposed Certificate*]

## CURRICULUM FRAMEWORK

The curriculum framework (in MS Word) for the proposed program that includes the following:

### A. Standards and benchmarks:

Florida Department of Education  
Curriculum Framework

2013 – 2014

Program Title: Transportation and Logistics  
Career Cluster: Transportation, Distribution, and Logistics

	AS	AAS
CIP Number	TBD	
Program Type	College Credit	
Standard Length	64 credit hours	
CTSO	N/A	
SOC Codes (all applicable)	11-3071; 13-1081; 43-5011; 43-5071; 53-1000; 53-1011; 53-1031	
Targeted Occupation List	<a href="http://www.labormarketinfo.com/wec/TargetOccupationList.htm">http://www.labormarketinfo.com/wec/TargetOccupationList.htm</a>	
Perkins Technical Skill Attainment Inventory	<a href="http://www.fldoe.org/workforce/perkins/perkins_resources.asp">http://www.fldoe.org/workforce/perkins/perkins_resources.asp</a>	
Statewide Articulation	<a href="http://www.fldoe.org/workforce/dwdframe/artic_frame.asp">http://www.fldoe.org/workforce/dwdframe/artic_frame.asp</a>	

### Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare students for further education and careers in the Transportation, Distribution, and Logistics career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Transportation, Distribution, and Logistics career cluster.

The content includes, but is not limited to, related business, accounting, and financial practices such as standard policies and operating procedures, negotiation techniques, planning, organizing, purchasing and inventory control theory. Emphasis is placed on planning and scheduling skills associated with transportation operations.

### Program Structure

This program is a planned sequence of instruction consisting of 64 credit hours.

### Laboratory Activities

Laboratory activities are an integral part of this program. These activities include instruction in the use of safety procedures, tools, equipment, materials, and processes related to these occupations. Equipment and supplies should be provided to enhance hands-on experiences for students.



## **Career and Technical Student Organization (CTSO)**

N/A

### **Accommodations**

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's IEP or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their postsecondary service provider. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

### **Articulation**

To be transferable statewide between institutions, this program must have been reviewed, and a "transfer value" assigned the curriculum content by the appropriate Statewide Course Numbering System discipline committee. This does not preclude institutions from developing specific articulation agreements with each other.

For details on articulation agreements which correlate to programs and industry certifications refer to [http://www.fldoe.org/workforce/dwdframe/artic\\_frame.asp](http://www.fldoe.org/workforce/dwdframe/artic_frame.asp).

### **Program Length**

The AS degree requires the inclusion of a minimum of 15 credits of general education coursework according to SACS, and it must be transferable according to Rule 6A-14.030 (2), F.A.C. The standard length of this program is 64 credit hours according to Rule 6A-14.030, F.A.C.

### **Certificate Programs**

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS/AAS degree program includes the following College Credit Certificates:

- Intermodal Freight Transportation Certificate – 18 credit hours
- Freight Movement and the Supply Chain Certificate – 15 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Add New Courses –

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA1154	Introduction to Supply Chain Management	3	1,2,3,5,6,7,8	2013-1

**Course Description:** This course is an introduction to the concepts, principles and techniques in the field of supply chain management (SCM) with particular emphasis on the economic significance of distribution to business and the U.S. economy. Students will learn the interrelationship between logistics and other areas of business, noting how the SCM pipeline can significantly impact customer loyalty by adding value. (3 hr. lecture)  
**Curriculum Action Rationale:** New course being developed for the Transportation & Logistics A.S. degree.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA1JJJ	Introduction to Rail Freight Operations	3	1,2,3,5,6,7,8	2012-3

**Course Description:** This is an introductory course in Rail Freight Operations. Students will learn the advantages and disadvantages of freight movement by rail, how rail lines are organized and operate, including the use of intermodal transfer facilities and on-dock rail. Topics include shipping documents, shipment tracking, management of human resources and equipment, and an overview of hazardous materials shipments and security issues. (3 hr. lecture ). Co-requisites: TRA1LLL, and TRA1SSSS.  
**Curriculum Action Rationale:** Core course in new Transportation and Logistics A.S. program and course in Intermodal Freight Transportation Certificate program.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA1LLL	Introduction to Freight Port Operations	3	1,2,3,5,6,7,8	2012-3

**Course Description:** This is an introductory course in Port Freight Operations. Students will learn how Seaports and Inland Ports are organized and operate, how freight is moved domestically and internationally, including the integration of port operations with other modes of transportation. Topics include break-bulk handling during loading, discharging, in-transit carriage, on-dock rail, harbor drayage, equipment and cargo management, and an overview of hazardous materials shipments and security. (0.1875 hr. lecture). Co-requisites: TRA1JJJ, and TRA1SSSS.  
**Curriculum Action Rationale:** New core course in the new Transportation and Logistics A.S. program and also in the Intermodal Freight Transportation Certificate.

APPROVE \_\_\_\_\_ OPPOSE \_\_\_\_\_ MORE INFORMATION \_\_\_\_\_

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA1SS5	Introduction to Trucking Operations	3	1,2,3,5,6,7,8	2012-3

**Course Description:** This is an introductory course in Trucking Operations and the movement of goods via highways and roadways. Students will learn U.S. Department of Transportation requirements, documents for shipping, vehicle and shipment tracking, scheduling, management of human resources and equipment, just-in-time implications and integration with other transportation modes. Hazardous materials shipments and security issues will be discussed. (3 hr. lecture). Co-requisites: TRA1LLL, and TRA1JJJ.

**Curriculum Action Rationale:** Core course in the new Transportation and Logistics A.S. program and required course in the Intermodal Freight Transportation Certificate program.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA2032	Transportation Public Policy, Law and Regulations	3	1,2,3,5,6,7,8	2012-3

**Course Description:** Students will learn the transportation regulatory environment including the various levels of government regulations. Review of security, environmental requirements, regulatory research and labor laws are also covered. (3 hr. lecture) Pre-requisites: TRA2010.

**Curriculum Action Rationale:** New core course in the Transportation and Logistics AS degree and required course in the International Freight Transportation Certificate.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA2156	Operations Management for Transportation	3	1,2,3,5,6,7,8	2012-3

**Course Description:** This course includes the skills necessary for a supervisory role in logistics. Students will learn the roles and responsibilities in managing different types of transportation operations. Topics include human resources, design and management of production operations, productivity, capacity planning, resource management, just-in-time systems, hazardous materials management, planning and project management. (3 hr. lecture) Pre-requisites: MAN2021.

**Curriculum Action Rationale:** New course being developed for the Transportation & Logistics A.S. degree.

APPROVE \_\_\_\_\_ OPPOSE \_\_\_\_\_ MORE INFORMATION \_\_\_\_\_

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA2XXX	Intermodal Transportation Operations & Project Management	3	1,2,3,5,6,7,8	2012-3

**Course Description:** Students will learn the fundamental elements necessary to plan, implement and control efficient and market-responsive integrated transportation systems. Topics include strategic, operational, and project management roles of transportation in supply chains. Emphasis is placed on services pricing, carrier selection, equipment and shipment planning, intermodal operations, financial/budgetary constraints, security and distribution services. (3 hr. lecture) Pre-requisites: AVM2120, and TRA2010, Co-requisites: TRA1LLL, and TRA1JJJ, and TRA1SSS.

**Curriculum Action Rationale:** This is core course in the new Transportation and Logistics Program and also a requirement in the new Intermodal Freight Transportation Certificate.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA2945	Transportation & Logistics Capstone I	1	1,2,3,5,6,7,8	2012-3

**Course Description:** In this Transportation & Logistics Capstone course, students will learn to incorporate the major concepts presented in the transportation courses through the application of special projects, internship and/or examination. The course will assess the student's understanding of major concepts in transportation and logistics. (1 hr. lecture) Pre-requisites:

**Curriculum Action Rationale:** New course being developed for the Transportation & Logistics A.S. degree.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
TRA2946	Transportation & Logistics Capstone II	1	1,2,3,5,6,7,8	2012-3

**Course Description:** This Transportation & Logistics course is a continuation of Capstone I. Students will learn to further the concepts acquired in Capstone I through a special project, internship or examination to assess the student's understanding of major concepts presented in the courses in the degree program. (1 hr. lecture) Pre-requisites:

**Curriculum Action Rationale:** New course being developed for the Transportation & Logistics A.S. degree.

APPROVE \_\_\_\_\_ OPPOSE \_\_\_\_\_ MORE INFORMATION \_\_\_\_\_

**Total credits required for the degree is 64.00**

This Intermodal Transportation A.S. degree program provides core courses in transportation policy, law, safety, security, management and marketing, and an integrated understanding of the intermodal relationship between the various modes of transportation. In addition, college credit certificates will be offered in Intermodal Freight Transportation and Surface Transportation.

Course	Course Title	Credits	Pre-/Co-Requisites
<b><u>GENERAL EDUCATION – 15 Credits Required</u></b>			
<b>Communications – 3 Credits Required</b>			
ENC 1101	English Composition 1	3	Pre-Req Approved Placement Testing
<b>Oral Communication – 3 Credits Required</b>			
SPC 1017	Fundamentals of Speech Communications	3	
<b>Humanities – 3 Credits Required</b>			
PHI 2604	Critical Thinking/Ethics	3	Pre-Req ENC 1101
<b>Behavioral and Social Science – 3 Credits Required</b>			
ECO 2013	Principles of Economics (MACRO)	3	
<b>Mathematics – 3 Credits Required</b>			
MAC 1105	College Algebra	3	Pre-Req MAT 1033 or Appropriate Test Scores
<b>Computer Competency</b>			
CGS 1060	Introduction to Microcomputer Usage		<b>*Credits count towards the elective area</b>
OR	Computer Competency Test (CCT)		
<b><u>MAJOR CORE REQUIREMENTS – 20 Credits Required</u></b>			
ACG 2021	Financial Accounting	3	Co-Req ACG 2021L
ACG 2021L	Financial Accounting Lab	1	Co-Req ACG 2021
ACG 2071	Managerial Accounting	3	Pre-Req ACG 2021; Co-Req ACG 2071L
ACG 2071L	Managerial Accounting Lab	1	Pre-Req ACG2021/L; Co-Req ACG 2071
ECO 2023	Principles of Economics (MICRO)	3	
MAN 2021	Principles of Management	3	
TRA 1154	Introduction to Supply Chain Management	3	
TRA 2010	Introduction to Transportation and Logistics	3	
<b><u>PROGRAM CORE REQUIREMENTS – 24 Credits Required</u></b>			
AVM 2120	Air Cargo Operations	3	
TRA 2156	Operations Management for Transportation	3	Pre-Req MAN 2021
TRA 2032	Transportation Public Policy, Law and Regulations	3	Pre-Req TRA 2010
TRA 2XXX	Intermodal Transportation Operations and Project Management	3	Pre-Req AVM 2120 and TRA 2010 Co-Req TRA 1LLL, TRA 1JJJ, TRA 1SSS
TRA 2702	International Logistics and Transportation	3	Pre-Req TRA 2010 and TRA 2032
TRA 1LLL	Intro to Port Freight Operations	3	Co-Req TRA 1JJJ, TRA 1SSS
TRA 1JJJ	Intro to Rail Freight Operations	3	Co-Req TRA 1LLL, TRA 1SSS
TRA 1SSS	Intro to Trucking Operations	3	Co-Req TRA 1LLL, TRA 1JJJ
<b><u>CAPSTONE COURSE REQUIREMENT – 1 Credit Required</u></b>			
TRA 2945	Transportation & Logistics Capstone I	1	Pre-Req Departmental Approval & Completion of the Program Core Requirements
<b><u>ELECTIVES – 4 Credits Required</u></b>			
CGS 1060	Introduction to Microcomputer Usage	4	
DSC 2242	Transportation and Border Security	3	
TRA 2946	Transportation & Logistics Capstone II	1	Pre-Req TRA 2945

**Note: The Highlighted Courses Are NEW To MDC.**

	TOTAL CREDITS
General Education Requirements _____	15 cr.
Major Core Requirements _____	20 cr.
Program Core Requirements _____	25 cr.
Electives _____	4 cr.
Total _____	64 cr.

**ADDITIONAL INFORMATION:**

**Computer Competency:** By the **16th earned** college level credit (excluding EAP and college preparatory courses), a student **must take** the Computer Competency Test and pass

**Or**

By the **31st earned** college level credit (excluding EAP and college preparatory courses), a student **must pass** CGS 1060, an equivalent continuing education or vocational credit course or retest with a **passing score on the Computer Competency Test.**

Students should check their individualized Degree Audit Report to determine the specific graduation policies in effect for their program of study for the year and term they entered Miami Dade. This outline includes current graduation requirements.

The final responsibility for meeting graduation requirements rests with the student.



**International Freight Transportation  
College Credit Certificate**

C.I.P. (TBD)

**Total credits required for the degree is 15.00**

This certificate provides specialized knowledge in the area international movement of freight. It covers the regulations and policies governing international shipments and border security, the intermodal transportation of international freight, the regulatory agencies and the documents and processes involved. This certificate is part of the Associate of Science Degree in Transportation and Logistics.

Course	Course Title	Credits	Pre-/Co-Requisites
<b>Program Requirements – 15 Credits Required</b>			
TRA 1154	Introduction to Supply Chain Management	3	
TRA 2010	Introduction to Transportation and Logistics	3	
TRA 2032	Transportation Public Policy, Law and Regulations	3	Pre-Req TRA 2010
TRA 2702	International Logistics and Transportation	3	Pre-Req TRA 2010 and TRA 2032
DSC 2242	Transportation and Border Security	3	

**Note: The Highlighted Courses Are NEW To MDC.**



**Intermodal Freight Transportation  
College Credit Certificate**

C.I.P. (TBD)

**Total credits required for the degree is 18.00**

This certificate provides specialized knowledge in the intermodal transportation of goods. It covers technical skills, procedures, processes and occupation-specific skills that will enhance employability. This certificate is part of the Associate in Science degree in Transportation and Logistics.

Course	Course Title	Credits	Pre-/Co-Requisites
<b>Program Requirements – 18 Credits Required</b>			
AVM 2120	Air Cargo Operations	3	
TRA 2010	Introduction to Transportation and Logistics	3	
TRA 2XXX	Intermodal Transportation Operations and Project Management	3	Pre-Req AVM 2120 and TRA 2010
TRA 1LLL	Intro to Port Freight Operations	3	Co-Req TRA 1LLL, TRA 1JJJ, TRA 1SSS
TRA 1JJJ	Intro to Rail Freight Operations	3	Co-Req TRA 1JJJ, TRA 1SSS
TRA 1SSS	Intro to Trucking Operations	3	Co-Req TRA 1LLL, TRA 1JJJ

**Note: The Highlighted Courses Are NEW To MDC.**

**Course Modification –**

<b><u>Course No.</u></b>	<b><u>Course Title</u></b>	<b><u>Credits</u></b>	<b><u>Campus</u></b>	<b><u>Eff. Term</u></b>
TRA2702	International Logistics & Transportation	3	1,2,3,5,6,7,8	2012-3

**Course Description:** International logistics concerns the flow of materials into, through and out of an international corporation as it relates to materials management, storage, inventory locations, physical distribution and documentation. This course will emphasize international transportation infrastructure and modes such as ocean, airfreight, intermodal movement, truck and rail. Choices among these modes will be explored considering such factors as transit time, packaging, risks, predictability and cost. The roles of freight forwarders and custom brokers in moving international cargo and operation of foreign trade zones will be discussed. Pre-requisites: TRA2010, TRA2032.

**APPROVE** \_\_\_\_\_ **OPPOSE** \_\_\_\_\_ **MORE INFORMATION** \_\_\_\_\_