EXECUTIVE SUMMARY

BACHELOR OF SCIENCE
with a major in
Information Systems Technology

Submitted to:
The Florida Department of Education

By:
MIAMI DADE COLLEGE
School of Engineering & Technology

June 24, 2013

Revision Submitted: September 16, 2013
INSTITUTION: Miami Dade College

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DEGREE TYPE (BS, BAS, other): BS
DEGREE TITLE Information Systems Technology
TOTAL NUMBER OF CREDIT HOURS: 120
PROPOSED DEGREE SIX-DIGIT CIP CODE: 11.0103, Track 4
PLANNED PROGRAM IMPLEMENTATION DATE: August 2014

PROGRAM DESCRIPTION/EMPLOYMENT OPTIONS FOR GRADUATES:
Miami Dade College (MDC) proposes a Bachelor of Science with a major in Information Systems Technology (BS-IST) degree program with concentrations in Networking and Application Development to serve students in Workforce Region 23 and primarily Miami Dade County and will provide students the necessary hands-on skills recommended by the industry.

The principal goal of the proposed MDC BS-IST is to address the workforce demand for information systems technology professionals with systems management and development expertise. Students will graduate with the critical skills and knowledge to support the design, planning and management of information infrastructures and resources within diverse organizational settings. The proposed 120 credit hour curriculum has been developed based on information and advice from faculty, industry professionals, and professional organization data regarding in-demand skills.

Employment opportunities for graduates include positions as Information Technology (IT) Managers, Information Systems (IS) Managers, Database Administrators (DBA), Computing Services Directors, Directors of Application Development, and Technical Services Managers. The program will also enable graduates to continue their formal education by pursuing graduate degrees in the computer sciences or information technology fields. The degree will provide seamless articulation for Miami Dade College associate in science students majoring in such programs as computer information technology, networking services technology, computer programming, database technology, internet services technology as well as graduates of Associate of Arts computer information systems and computer science programs.

BOARD OF TRUSTEES APPROVAL DATE: June 18, 2013
PRESIDENT’S SIGNATURE AND DATE: September 16, 2013
The Miami Dade College (MDC) School of Engineering and Technology (EnTec) proposes a Bachelor of Science with a major in Information Systems Technology (BS-IST) degree program with concentrations in Networking and Application Development in order to provide students with the workforce driven, hands-on training required for employment in information systems technology support. The program of study provides students with the critical skills and knowledge required to direct and control computerized information resources within diverse organizational settings. The study of Information Systems Technology provides professionals with the expertise and knowledge to support the design, planning and management of information infrastructures, as well as coordinate information resources. The curriculum provides knowledge of the concepts upon which information systems are based and applies this understanding by analyzing applications to real-world problems and designing suitable solutions. The proposed BS-IST degree program addresses the need for information systems technology professionals with systems management and development expertise. Graduates of the program may qualify for positions as programmers, systems analysts, user support analysts and other Information Systems Technology positions, as well as continue their formal education by pursuing graduate degrees in the computer science or information technology fields.

The proposed BS-IST consists of 120 credits, including 36 credits of General Education courses. The program will be offered by Miami Dade College to serve students in Work Force Region 23 and primarily Miami-Dade County.

A. PLANNING PROCESS

A planning committee comprised of full-time faculty and administrators assessed the need for a workforce related BS-IST (Appendix A, pg. 33). The committee conducted industry and student surveys (Appendices G, pg. 58, H, pg. 68), examined national, state, and local workforce data, analyzed the region’s academic IST programs, reviewed existing Florida College System IST baccalaureate degrees, discussed the BS-IST with Workforce Region 23 state and private universities (Appendices D, pg. 40, E, pg. 45), evaluated available MDC resources, facilities, and equipment (Appendix N, pg. 88), and elicited recommendations from external stakeholders, including local industry leaders and state and local government (Appendices D, pg. 40, E, pg. 57, I, pg. 76). Based on the findings, MDC faculty developed and recommended the proposed program approved by the Board of Trustees (Appendices J, pg. 80, K, pg. 83, L, pg. 84). To date, MDC has received 18 letters of support from local industry leaders, workforce development agencies and economic development councils (Appendix P, pg. 92).

Local public and private institutions were notified in writing about Miami Dade College’s intention to propose the degree (Appendix D, pg. 40). In-person meetings were conducted with Florida International University (FIU) and Barry University to discuss the proposed MDC BS-IST (Appendix C, pg. 38). FIU had no formal comment, and Barry University was
receptive and looked forward to MDC graduates to enrolling in their Master’s level IT program. University of Miami (UM), Florida Memorial University (FMU), and St. Thomas University (STU) were notified but did not respond to requests for meetings. FAU (Region 22) submitted a Letter of Objection and MDC responded on May 21, 2014 (Appendix C, pg. 38).

**B. PROGRAM IMPLEMENTATION TIMELINE**

The assessment of need and demand was conducted from February through December 2012 (Appendices C, pg. 38, G, pg. 58). Curriculum development activities occurred between September 2012 and March 2013. SACS accreditation activity will likely occur between January and April 2014, with recruitment of additional faculty and staff occurring from April through July 2014 and subsequently April through July 2015, 2016, and 2017. Systems, facilities and resource upgrades to include the renovation of faculty offices and IT equipment upgrades will take place from July 2015 through August 2016. Development of marketing and recruitment strategies will begin in April 2014 and continue for the duration of the program, to include advisement and tutoring services. Upper division coursework is to begin in August 2014. Accreditation Board for Engineering and Technology (ABET) activities will commence January 2016 through August 2017 (Table 1: Timeline, page 13).

**C. WORKFORCE DEMAND/UNMET NEED**

The geographic region to be served is Workforce Region 23 Miami-Dade and Monroe Counties. As of 2012, there were 38,820 individuals employed in information systems technology professions and 1,157 average annual openings 1. In Workforce Region 23, Florida International University (FIU) reported 194 student completions in 2011-2012; 132 from CIP code 11.0103 (Track 2) – Information Technology which is a similar discipline area, but a different degree track option and 62 in Computer Science and Support programs. 2 There are no nonpublic institutions offering CIP code 11.0103, Track 4, and consequently no recent graduates in that CIP. There are programs in other information technology tracks and/or computer science and support disciplines. Based upon the College Navigator results, completions in Information Technology and/or Computer Science programs from local private institutions in 2011-2012 are reported at 97: Barry University 64, University of Miami (UM) 20, St. Thomas University (STU) 5 and Florida Memorial University (FMU) 8.

With average annual openings of 1,157 and the number of recent graduates (N=291), the gap in the locally educated workforce is 866 and therefore the number of graduates does not meet the projected workforce demand/need.

**D. FACILITIES AND EQUIPMENT**

The proposed program will take full advantage of current facilities available throughout MDC. There are 24 technology equipped classrooms and a total of 1,412 technology workstations available across MDC’s three major campuses (Wolfson, Kendall, and North).

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3 Ibid
4 Ibid
5 Ibid
Minor renovations will be made in July 2015 through August 2016 ($13,000) for offices for the two new faculty members and part-time staff who will be hired.

**E. LIBRARY/MEDIA**

Currently, the database resources at MDC are adequate to support the proposed courses. Existing faculty personnel will be able to support the discipline with material selection and instructional needs. A budget of $41,625 is being allotted to cover the costs of supplementing the library’s electronic book holdings and maintaining subscriptions to electronic technology databases. No cost is included for library renovations since the electronic/digital resources will be “housed” virtually and be available college-wide (Appendix N, pg. 88).

**F. ACADEMIC RESOURCES**

There are currently 29 full-time technology faculty members throughout the campuses; 10% (3) with terminal degrees. MDC also has 105 technology part time faculty; 3% (3) with terminal degrees. MDC will hire two full-time doctorally-prepared faculty members by August 2016 and two part-time faculty (1 FTE) by August 2015.

**G. COST TO STUDENTS**

The proposed MDC BS-IST provides students an affordable educational opportunity designed to lead to high-wage employment in technology careers. The student tuition for 4 years of study for the proposed BS-IST is estimated at $14,126.52 compared to $24,199.20 to $207,900.00 at State University System (SUS) and private institutions in Region 23 (see Table 4).

**H. ACADEMIC CONTENT**

To address workforce demands and unmet need, students will receive both theoretical knowledge and hands-on skills in high demand areas of information systems technology, including systems analysis, programming, network and systems management/administration, database management/administration, user support, and cyber security. In addition to the core curriculum, students will have the option of specializing in either Networking or in Application Development. The curriculum, which was developed by an interdisciplinary team of School of Engineering and Technology (EnTec) faculty, emphasizes hands-on, practical skills acquisition combined with appropriate theory, and culminates in a real-world capstone project.

**I. ENROLLMENT, PERFORMANCE AND BUDGET PLAN**

The proposed program builds on the existing MDC departmental infrastructure for information systems technology. The projected expenditure for academic years 2013 through 2018 averages $206,546 (Appendix N, pg. 88). Enrollment projections are based on 30 students (16 FTEs) beginning in August 2014, and increasing to 210 students (112 FTEs) by 2017-2018. Revenue from student fees and other sources is projected to be $1,032,731 for the 5-year start-up period. It is projected that the program will be self-sustaining by the 2016-2017 academic year.
J. PLAN OF ACTION IF PROGRAM MUST BE TERMINATED

As mandated by the State Board of Education, Miami Dade College will demonstrate diligence to individual needs in the event of program termination and will enact an approved degree completion plan to enable eligible students to complete the appropriate BS-IST degree program coursework following the termination decision (Appendix O, pg. 89) to include transition services, “teach-out” options, and options for students to complete with other area institutions.

SUMMARY

Based on the documentation of workforce need, unmet demand, service to a diverse student population, program design, and cost of attendance, the MDC faculty, administration, and Board of Trustees unanimously approved the Bachelor of Science with a major in Information Systems Technology with an implementation date of fall 2014.