

Dr. Jeannine O. Kahn,
Assistant Commissioner for Academic Affairs
Louisiana Board of Regents

October 6, 2015

Dear Dr. Kahn,

On August 28, 2015, you notified me via email that all Chief Academic Officers, as well as the Board of Regents' staff had reviewed the University of Louisiana at Lafayette's *Letter of Intent* for a new M.S. degree program in Informatics, and had raised some questions related thereto. After careful consideration of these questions, our campus would like to submit the following responses:

1. *What courses included in the curriculum would be new offerings?*

RESPONSE: All courses identified and described in the *L.O.I.* would be new offerings.

2. *It is noted that "funds for graduate student support will come from the private sector, in the form of four internships subsidized by local companies." Please identify which companies and provide letters of support/commitment from these companies.*

RESPONSE: The companies include Perficient (5 internships per year), Apex Innovations (1-2 internships per year), CGI (up to 5 internships per year), Enquero (5 internships per year), Louisiana Economic Development, Lafayette Economic Development Authority (3-5 internships per year), and One Acadiana. Letters of support are attached. Please note that the total number of internships funded by these companies has grown up to 22 per year, with firm pledges stated in their letters of support.

3. *There is no mention of LSU's M.S. in Analytics in the LoI. Coursework required of LSU's program has significant overlap with ULL's proposed program (IT foundation, networks and security, systems development, data mining, web application development, etc.). Please address. The issue of duplication is a big one and we need to understand why another program is needed – how LSU is not meeting demand, etc.*

RESPONSE: Although some coursework overlap indeed exists between UL Lafayette's Master of Science in Informatics and LSU's Master of Science in Analytics, the emphases of the two programs are vastly different. The Master of Science in Informatics, to be housed in the Ray P. Authement College of Sciences, proposes to educate students about the complex computational requirements for realization of Enterprise Computing infrastructures that are necessary for today's organizations. As such, the M.S. in Informatics program leverages the

strengths of the faculty in the School of Computing and Informatics, and utilizes existing relationships with industry, to meet the educational objectives of our program.

The following excerpt from the Master of Science in Informatics proposal thus describes its mission and purpose:

“The Mission and Purpose of the Master of Science in Informatics (MSI) program is to educate graduate students in the use of the scientific method for the application of computing and information technologies, as well as the design, maintenance, and adaptation of information systems that solve problems, with an understanding of human needs and context.”

Complementing the computational emphasis by the program is the focus on a user-centered perspective, which involves the study of the structure, behavior, and interactions of natural and artificial systems (technics) that store, process, and communicate information. Information sciences, human computer interaction, and information architecture and management are among the areas of study in the multi-disciplinary field of Informatics.

In contrast, the Master of Science in Analytics at LSU, housed in the E.J. Ourso College of Business, “is designed to prepare students to use data-driven methods to contribute to organizational effectiveness and guide decisions” (from <https://business.lsu.edu/Information-Systems-Decision-Sciences/Pages/MS-Analytics.aspx>). Moreover,

“[LSU’s] curriculum emphasizes the use of business analytics, business intelligence, and information technology to solve problems, reduce costs, increase revenues, streamline processes, and improve decision-making. Students learn specialized skills and knowledge drawn from the fields of computer science, statistics, operations research, and quality management to achieve results through a mixture of classroom instruction, hands-on exercises, and team-based projects.”

Unlike UL Lafayette’s proposed Master of Science in Informatics, which is conceived as a Science degree program that emphasizes the computational aspects of Enterprise Computing infrastructures, LSU’s Master of Science in Analytics (defined as a Business degree) emphasizes the development of solutions that reduce costs, increase revenues, and improve processes and decision-making, among other learning objectives.

Key core coursework requirements of UL Lafayette’s Master of Science in Informatics are as follows:

- **INFX 501.** Foundations of Informatics
- **INFX 502.** Systematic Methods in Informatics
- **INFX 510.** Human-Computer Interaction (HCI) in Informatics
- **INFX 540.** Informatics Network Infrastructures and Management
- **INFX 580.** Systems Development
- **INFX 590.** IT Governance, Risk Management, and Compliance (GRC)
- **INFX 595.** Informatics Capstone

All of these courses involve the application of both the scientific method and principles of computational thinking. (See <http://www.cs.cmu.edu/~CompThink/> for further information about computational thinking and its importance for computing).

In clear contrast, the key core coursework (excluding two electives from ISDS and MKT, as well as ISDS 7990, Practicum Project) for LSU's Master of Science in Analytics appears to be as follows (from <https://business.lsu.edu/Information-Systems-Decision-Sciences/Pages/MS-Analytics-Curriculum.aspx>):

- **EXST 4087.** SAS Data Access & Programming
- **ISDS 7024.** Advanced Statistical Analysis
- **ISDS 4141.** Introduction to Data Mining
- **ISDS 7510.** Database Management with SQL and R
- **ISDS 7530.** Strategic Business Analytics
- **EXST 7087.** Survival Analysis Non-Linear Models
- **MKT 7716.** Multivariate Statistics
- **ISDS 7511.** Business Intelligence
- **ISDS 7103.** Operations Research

This comparison of key courses clearly shows an obvious distinction between the two programs. Specifically, UL Lafayette's Master of Science in Informatics emphasizes the scientific method and computational thinking, whereas LSU's Master of Science in Analytics emphasizes business statistics via a business multidisciplinary approach blending ISDS, EXST, and MKT. Thus, the UL Lafayette program is intended to train graduates to solve applied computing problems in a variety of human endeavors (e.g., government, business and industry, education, art and architecture, allied health, among others) using a well-tested, sound approach (the scientific method) by means of computational thinking. The LSU program is intended to solve business problems using computational approaches currently employed in businesses. We acknowledge that some overlap may exist between a small number of LSU's courses (not listed above) and UL Lafayette's elective courses (for which a maximum of 9 credit hours may be applied toward the degree) that also are not listed above, but are indicated in the LOI. However, this overlap is minor and does not affect the separate, distinctive identities and separate intent of the two programs.

Indeed, the Master of Science in Informatics is not intended to replace, mimic, detract from, or compete with LSU's Master of Science in Analytics. UL Lafayette views both programs as complementary toward meeting current and future needs and genuinely considers that both programs are important to today's highly-competitive, dynamic, and data-rich industry environment. On the subject of perceived duplication, we fully share Dr. Karen Denby's recent opinion that "(...) given the emphasis on computer science education and training for workforce needs, alone, coupled with the surge in computer-related opportunities in this immediate area and the strength of masters-level programs in the state, particularly in the southern half of the state, duplication seems to be a necessary function to meet demand" (August 10, 2015 email exchange regarding LSU's new M.S. program in Computer Science, previously defined as an M.S. in Systems Science). Like the technology companies that provided letters of support for this program, we thoroughly agree with this statement and firmly believe that the UL Lafayette M.S. degree in Informatics is necessary to meet Louisiana's expanding workforce needs.

Thank your for requesting this clarification. We hope that our response will assuage any doubt that this program is academically well conceived, as well as professionally and economically beneficial to the State's wellbeing.

Sincerely,

Dr. James P. Henderson

Provost and Vice President for Academic Affairs



Sept. 11, 2015

Dr. James Henderson, Provost
University of Louisiana at Lafayette
Lafayette, Louisiana 70504

Dear Dr. Henderson,

I am pleased to offer strong support for the proposed Master's degree program in Informatics at the University of Louisiana at Lafayette. As Brian and I met with the Dean of the College of Sciences, Dr. Azmy Ackleh, and faculty from the School of Computing and Informatics just last week and having discussed in some detail the planned curriculum. I am very enthusiastic about the Master of Science in Informatics and its likely impact on Apex Innovations. I am confident that graduates of this program will be well prepared to address current and anticipated industry needs be they local, regional, national or international. I am certain your graduates will be solidly trained in the Information Technology aspect of enterprise computing, regardless of end-user/organization domain or area. Enterprise computing includes the analytics, reporting, database management, and other software solutions systems, areas of computing that span the entire organization. The curriculum you and your colleagues developed is sufficiently generalized to allow graduates to find employment both within and outside of Louisiana. As Lafayette continues to develop into a regional hub for enterprise computing and information technology industries, the initial area of focus of the program aimed at using information in organizations to improve products and services is an excellent choice!

Apex Innovations is proud of our current team of amazing employees who collectively boast the following from UL: BA-Accounting and Finance, BSBA-Accounting, BS- Informatics Media Technology, BFA-Music, BA-Mass Communications and Print Journalism, minor in English, BS-Health Information Management, as well as three with BS-Nursing.

We were fortunate to hire John Klein in Dec. 2014, from the Bachelor of Science program in Informatics. He joined us as a student prior to graduation and we experienced first-hand the excellent training and preparation that your students receive. He is a rock star. It is because of this positive experience and because of our meeting and discussions that I am confident, the students of the Master of Science in Informatics at UL Lafayette will be exceptionally well trained.

Accordingly, we plan to give serious consideration to your MS graduates for any opened position in our company in the area of computing and informatics. Furthermore, we would be interested in establishing one or two student-internships for highly performing students enrolled in this program. In addition, we are currently hiring.

Please let me know how Apex Innovation can assist further with program.

Sincerely,

A handwritten signature in black ink that reads "Marianne Bourgeois". The signature is written in a cursive, flowing style.

Marianne Bourgeois
President

Apex Innovations, LLC
3909 Ambassador Caffery Pkwy
BUILDING K
Lafayette, Louisiana 70503
Ph: 337-216-4599



CGI
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www.cgi.com

September 21, 2015

Dr. James Henderson
Martin Hall, Room 231
104 University Circle
Lafayette, LA. 70504

Dear Provost Henderson:

On behalf of CGI, I am pleased to offer strong support for the proposed Master's degree program in Informatics at the University of Louisiana at Lafayette. Having met with you and your faculty, I am very enthusiastic about the Master of Science in Informatics and its likely impact on CGI. The proposed MS in Informatics program will offer new courses aligned with industry needs, incorporate industry relevant technologies and software development methodologies into course design, and provide for industry internships and capstone opportunities.

Having conducted a two day deep-dive of UL's curriculum when we first accounted our plans to establish an on-shore delivery center in Lafayette, these are exactly the types of programs we identified as priorities for our partnership with UL. We are now excited about the opportunity to partner with you and to support you in accomplishing these shared goals.

As a newly established company in Louisiana, we certainly recognize an urgent need for all (or as many) universities in Louisiana to establish applied, industry-oriented, computer science and informatics programs such as the one you are proposing, in order to support and sustain the growing IT ecosystem in Louisiana. Based on your proposed curriculum, your students will be knowledgeable in all aspects of enterprise computing including analytics, reporting, database management, and other software solutions systems - in short, areas of computing that span the entire organization. The curriculum developed is sufficiently generalized to allow graduates to find employment both within and outside of Louisiana. We envision an ongoing collaboration with UL Lafayette, by accepting your invitation to serve on the Advisory Council for the Computer Science and Informatics programs. This will allow us to work with you to ensure that the program design and implementation continually evolve to meets our needs and industry priorities.

CGI is anticipating hiring 400 new graduates holding degrees in programs like computing and informatics within the next four years. In 2014, more than 30% of our new hires originated from UL Lafayette, many of which are graduates from your Bachelor of Science program in Informatics. As a result, we have already experienced first-hand the excellent training and preparation that your students receive. It is because of this positive experience and because of our discussions that I am confident the students of the Masters of Informatics at UL Lafayette will be exceptionally well trained.



Accordingly, CGI pledges to establish an internship program, and financially support up to five student-internships each year for highly performing students enrolled in this program. It is our expectation that these student interns will these be embedded into our real-world software development projects as part of our collaborations with the Center for Software Excellence within the Informatics Research Institute and the School of Computing and Informatics.

We look forward to this collaboration. Please let me know if we could be any further assistance.

Sincerely,

A handwritten signature in black ink, consisting of several fluid, overlapping strokes that form a stylized 'W' and 'L'.

William LaBar, CGI Federal
Director of Consulting Services



September 17, 2015

Dr. James Henderson
Provost and Vice President for Academic Affairs
University of Louisiana at Lafayette
Martin Hall, Room 231
104 University Circle, Lafayette, LA. 70504

Dear Provost Henderson,

On behalf of Enquero, I am pleased to offer strong support for the proposed Master's Degree Program in Informatics at the University of Louisiana at Lafayette. Having met with you and your faculty, and having discussed in some detail the planned curriculum, I am very enthusiastic about the Master of Science in Informatics and its likely impact on Enquero. We appreciate that the MS in Informatics program offers you the flexibility to add new courses aligned with industry needs, incorporate industry relevant technologies and software development methodologies into course design, and provide for industry internships and capstones that all of us have all identified as priorities that need to be incorporated into curricula at UL. We are excited about the opportunity to partner with you and to support you in accomplishing these shared goals.

As a newly established company in Louisiana, we are pleased to see this initiative from UL Lafayette, because we cannot find enough talent in Louisiana to fill our needs. There is certainly an urgent need for all (or as many) universities in Louisiana to establish applied, industry-oriented, computer science and informatics programs such as the one you are proposing, in order to support and sustain the growing IT ecosystem in Louisiana.

I am confident that graduates of this program will be well prepared to address current and anticipated industry needs be they local, regional, national or international. Your graduates will be solidly trained in the Information Technology aspects of enterprise computing. Based on your proposed curriculum, your students will be knowledgeable in all aspects of enterprise computing including analytics, reporting, database management, and other software solutions systems - in short, areas of computing that span the entire organization. The curriculum you and your colleagues have developed is sufficiently generalized to allow graduates to find employment both within and outside of Louisiana.

As Lafayette continues to develop into a regional hub for enterprise computing and information technology industries, the initial area of focus of the program will be aimed at using information in organizations to improve products and services. We envision an ongoing collaboration with UL Lafayette, by accepting your invitation to serve of the Advisory Council for the Computer Science and Informatics programs. This will allow us




to work with you sure that the program design and implementation continually evolve to meets your needs and industry priorities.

Enquero is anticipating hiring 250 new graduates holding degrees in computing and informatics within the next five years. In 2014, we hired 12 graduates of your Bachelor of Science program in Informatics and experienced first hand the excellent training and preparation that your students receive. It is because of this positive experience and because of our discussions that I am confident the students of the Masters of Informatics at UL Lafayette will be exceptionally well trained.

Accordingly, I pledge in this letter to provide conditional job offers to five from amongst the top 25% of the graduates from this program within the first three years. Furthermore, I plan to establish up to five student-internships each year for highly performing students enrolled in this program. It is our expectation that these student interns will be embedded into our real-world software development projects as part of our collaborations with the Center for Software Excellence within the Informatics Research Institute and the School of Computing and Informatics.

We look forward to this collaboration. Please let me know if we could be any further assistance.

Sincerely,


Hemant Asher 09/18/2015
President and CFO
Enquero Inc.

September 29, 2015

Dr. James Henderson
Provost and Vice President for Academic Affairs
University of Louisiana at Lafayette Martin Hall, Room 231
104 University Circle, Lafayette, LA. 70504

Dear Provost Henderson,

On behalf of Louisiana Economic Development (LED) and its workforce development partner LEDFastStart, I am pleased to offer strong support for the proposed Master's degree program in Informatics at the University of Louisiana at Lafayette. The award-winning LEDStartFast program has been recognized as the Nation's #1 ranked program for four consecutive years, for its successes in talent development and recruitment that meet the needs of existing and new businesses in Louisiana in support of the state's business retention and recruitment efforts. We work with our education ecosystem partners including universities and community colleges to create alignments between academic curricula and industry needs.

It is in this context that I am very enthusiastic about the Master of Science in Informatics and its likely impact on the three IT companies that we successfully recruited to Louisiana and with your help to the Acadiana region during this past year. The proposed MS in Informatics program will offer new courses aligned with industry needs, incorporate industry relevant technologies and software development methodologies into course design, and provide for industry internships and capstone opportunities. I am optimistic that this MS program will not only serve the needs of IT companies in the Acadiana region, but will also position UL Lafayette favorably to support all high-technology companies we recruited to Louisiana during the past few years.

As we work closely with these companies almost on a daily basis, my colleagues at LED and I recognize that it will take greater output of qualified software developers and creative programs by all of Louisiana's universities, to fully realize the opportunity and meet the needs of these IT companies in Louisiana. No one university has the resources, programs, and capabilities to meet the workforce and talent needs of these companies. And, this demand will continue for years to come. While UL Lafayette already produces more Computer Science and Informatics graduates than all other universities in the state, the reality is that we need more from you! That's particularly why I am thrilled that LED has made an investment of \$4.5M to help UL Lafayette expand its programs and create new programs - like the proposed MS Informatics program - to meet the needs of our IT ecosystem. LED is excited about the opportunity to partner with you and to support you in accomplishing these shared goals. It is only fitting that UL Lafayette is once again leading the development of an applied, industry-oriented MS in Informatics program that might become a national model, just like it did a few decades ago when it offered the nation's first MS program in Computer Science in 1962.

We look forward to this collaboration. Please let me know if we could be any further assistance.

Sincerely,



Jeff Lynn
Executive Director, Workforce Development Programs



October 6, 2015

Dr. James Henderson
Provost and Vice President for Academic Affairs
University of Louisiana at Lafayette
Martin Hall, Room 231
104 University Circle, Lafayette, LA. 70504

Dear Provost Henderson,

As President and CEO of the Lafayette Economic Development Authority (LEDA), I am pleased to offer my support for the proposed Master's degree program in Informatics at the University of Louisiana at Lafayette. Over the past 18 months, LEDA has partnered with UL Lafayette and Louisiana Economic Development in recruiting four IT companies. The strength of your computing programs has been critical to these economic development successes.

As part of LEDA's business retention and recruitment efforts, we continually meet with these companies and others to determine how we can ensure their success by working with our education partners including UL Lafayette and South Louisiana Community College. As such, I am very enthusiastic about the Master of Science in Informatics and its likely impact on the IT companies we successfully recruited. The proposed MS in Informatics program will offer new courses aligned with industry needs, incorporate industry relevant technologies and software development methodologies into course design, and provide for industry internships and capstone opportunities.

I am optimistic that this MS program will not only serve the needs of IT companies in Acadiana, but will also position UL Lafayette favorably to support all high-technology companies Louisiana has recruited in recent years. It is only fitting that UL Lafayette is once again leading the development of an applied, industry-oriented MS in Informatics program that might become a national model, just like it did in 1962 when it offered the nation's first MS program in Computer Science.

As we continue to work closely with these companies and talk to our counterparts from across the region and the state, we recognize that it will take greater output of qualified software developers and creative programs, by all of Louisiana's universities, to fully realize the opportunity and meet the needs of these IT companies. No single university has the resources, programs, and capabilities to meet the workforce and talent needs of these companies. While UL Lafayette already produces more Computer Science and Informatics graduates than all other universities in the state, the demand for these positions exceeds the supply.

LEDA is excited about the opportunity to partner with you and to support you in accomplishing these shared goals. Over the past decade, LEDA has hired several computer science and informatics students as interns to help us in our efforts to use data-driven systems, GIS and IT tools in our economic development efforts. As evidence of commitment to the proposed program, and to UL Lafayette, LEDA commits to hiring three to five students each year as interns.

I am extremely proud of our collaboration and the outcomes it has produced for the region. I look forward to our continued partnership. Please let me know if we could be any further assistance.

Sincerely,

A handwritten signature in black ink that reads "Gregg Gothreaux".

Gregg Gothreaux
President and CEO

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October 5, 2015

Dr. James Henderson
Provost and Vice President for Academic Affairs
University of Louisiana at Lafayette
Martin Hall, Room 231
104 University Circle, Lafayette, LA. 70504

Dear Provost Henderson,

On behalf of One Acadiana (1A), the recently established regional economic development organization, I am pleased to offer my strongest support for the proposed Master's degree program in Informatics at the University of Louisiana at Lafayette.

One Acadiana brings together the business community across nine parishes to pursue a long-term vision of making Acadiana one of the most high quality, sought after regions in the South for business and talent. One Acadiana is focused on delivering a new, highly professional, nationally competitive economic development program for the region, which will help manage Acadiana's current and long-term growth, retain and grow current business, and diversify the economic base by attracting new emerging growth industries and professional talent.

With the growth of the IT cluster in the region, UL Lafayette's past and future relevance to the industry and the region can't be overstated. 1A has been honored to partner with UL Lafayette as well as our regional and state economic development partners in recruiting four IT companies during the past 18 months. I am very enthusiastic about the Master of Science in Informatics and its likely impact on these IT companies that we successfully recruited. The proposed MS in Informatics program will offer new courses aligned with industry needs, incorporate industry relevant technologies and software development methodologies into course design, and provide for industry internships and capstone opportunities.

I am optimistic that this MS program will not only serve the needs of IT companies in the Acadiana region, but will also position UL Lafayette favorably to support all high-technology companies that Louisiana has recruited during the past few years. It is only fitting that UL Lafayette is once again leading the development of an applied, industry-oriented MS in Informatics program that might become a national model, just like it did a few decades ago when it offered the nation's first MS program in Computer Science in 1962.

1A is excited about the opportunity to partner with you and to support you in accomplishing these shared goals. We look forward to our continued partnership. Please let me know if we could be any further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jason El Koubi'.

Jason El Koubi
President & CEO

September 18, 2015

Dr. James Henderson
Provost and Vice President for Academic Affairs
University of Louisiana at Lafayette
Martin Hall, Room 231
104 University Circle
Lafayette, LA 70504

Dear Provost Henderson,

On behalf of Perficient, I am pleased to offer strong support for the proposed Master's degree program in Informatics at the University of Louisiana at Lafayette. I am very enthusiastic about the Master of Science in Informatics and its likely impact on Perficient. The proposed MS in Informatics program will offer new courses aligned with industry needs, incorporate industry relevant technologies and software development methodologies into course design, and provide for industry internships and capstone opportunities. We are now excited about the opportunity to partner with you and to support you in accomplishing these shared goals.

As a newly established company in Louisiana, we certainly recognize an unmet need for universities in Louisiana to establish applied, industry-oriented, computer science and informatics programs such as the one you are proposing, in order to support and sustain the growing IT ecosystem in Louisiana.

Based on your proposed curriculum, your students will be knowledgeable in all aspects of enterprise computing including analytics, reporting, database management, and other software solutions systems. Perficient has great interest in analytics, with specific focus on health analytics. We envision an ongoing collaboration with UL Lafayette, by accepting your invitation to serve on the Advisory Council for the Computer Science and Informatics programs. This will allow us to work with you to ensure that the program design and implementation continually evolve to meet our needs and industry priorities.

Perficient is anticipating hiring 200+ employees holding degrees in computing and informatics within the next five years. In 2015, we hired graduates of your Bachelor of Science program in Informatics and experienced first-hand the excellent training and preparation that your students receive. It is because of this positive experience and because of our discussions that I am confident the students of the Masters of Informatics at UL Lafayette will be exceptionally well trained.

As part of our on-going campus recruiting strategy, Perficient plans to establish a formal internship program each year for five highly performing students enrolled in computing and informatics programs. This program is modeled after our established internship programs in other Perficient offices and is dependent on prevailing business conditions and needs evaluated on a quarterly basis. These internship programs are a combination of training and real-world software development projects and provide an exceptional 'foot in the door' for students that are selected for these programs.

We look forward to this collaboration. Please let me know if we could be any further assistance.

Sincerely,


Kevin Sheen
Perficient