

June 16, 2011

Dr. Belle S. Wheelan  
President, Commission on Colleges  
Southern Association of Colleges and Schools  
1866 Southern Lane  
Decatur, GA 30033

Dear Dr. Wheelan,

I write to notify you of the University of Louisiana at Lafayette's intent to request authority to initiate a new program that constitutes a substantive change: a Ph.D. in Systems Engineering, within the College of Engineering. The intended date of implementation is January 15, 2012. The University will submit a full Substantive Change Prospectus at least three months prior to initiation.

The University has been laying the foundation for this program for some time and strongly believes that the establishment of this unique program for Louisiana is timely given the strong potential of this degree program to stimulate economic development, meet the state's job demands, and increase dramatically the UL Lafayette College of Engineering's already strong enrollment and productive research output. A full proposal is currently being considered by the University of Louisiana System for staff review and system action, and will then be considered for approval by the Louisiana Board of Regents. No other Ph.D. programs in systems engineering exist in Louisiana.

The University currently offers a Master's degree in Engineering, with concentrations in Chemical, Civil, Electrical and Computer, Mechanical, and Petroleum Engineering, and a Ph.D. in Computer Engineering. Each of these departments will be involved in the proposed Ph.D. program, an interdisciplinary model that has been successful elsewhere. Systems engineering is geared toward the rapid design and development of large and complex systems. It uses the results of engineering design approaches and management systems theory while sharing techniques with operations research. The field owes its solutions-driven developmental approach to software engineering, which also tackles designing complex systems.

Systems Engineering integrates all the specialty and sub-specialty groups of engineering disciplines into a team whose efforts result in a structured development process that proceeds from concept to production to operation. Systems engineering holistically considers human factors, economics, and technical needs of technology users with the goal of providing a quality

product that fully meets the user's needs. The overarching objective of this initiative is to educate Systems Engineers within Louisiana that are specially trained to address the complexities of large engineering systems, such as deep-water drilling, automotive design and manufacturing, hospital intensive care systems, coastal engineering, algae to fuels/chemical production facilities, supercomputing interconnected grids, missile defense weapons, internet protection systems, spacecraft design, coastal ecosystems, visualization platforms, highway safety systems, robotic units, refineries, fiber optic networks, aircraft, vehicle control systems, biomass gasification units, management of utilities during disaster events, and power grids.

Students in the proposed program will take a minimum of 24 hours from the General Systems Engineering Program Core and 21 hours from the Specialty Core from their selected area (home department: either Chemical, Civil, Electrical & Computer, Mechanical, or Petroleum Engineering); yielding a total of 45 hours of coursework (non-dissertation hours). The Specialization Core content will be designed by the student's graduate advisory committee in consultation with the student and major professor.

The faculty for the proposed program is highly qualified, with very substantial recent publication and grant records, as well as industry experience. An advisory board composed of six industry and university experts with direct knowledge of Systems Engineers will be created. It is targeted that four members will be from industry and two from other colleges of engineering offering a similar degree program.

Again, a full substantive Change Prospectus will be forthcoming at least three months prior to implementation, together with approvals from the University of Louisiana System Board and Louisiana Board of Regents.

Please do not hesitate to contact me if I can provide any further information.

Sincerely,

Jordan Kellman  
Interim Director

cc. President E. Joseph Savoie  
Vice President for Academic Affairs Carolyn Bruder  
Dr. Jack Allen



**Southern Association of Colleges and Schools  
Commission on Colleges  
Substantive Change Letter of Notification**

Name of institution: University of Louisiana at Lafayette

Name of the change proposed: Initiation of a Ph.D. in Systems Engineering

Credential(s) involved: Doctor of Philosophy in Systems Engineering

Starting date: January 2012

Closely related programs already approved for the institution:

- Master of Science in Engineering, with concentrations in chemical, civil, electrical and computer, mechanical and petroleum engineering.
- Master of Science in Computer Engineering
- Doctor of Philosophy in Computer Engineering