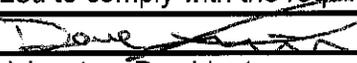


Name of Lead Institution (only one)	Lourdes University
Project Start Date	4/1/2014
Interns and/or Co-ops Start Date	5/1/2014
Primary Contact - Individual must be authorized to sign grant contract and legally responsible as representative.	Dr. Geoffrey Grubb, Provost, Lourdes University 6832 Convent Blvd., Sylvania, OH 43560 419-824-3818, ggrubb@lourdes.edu
President/CEO Name	Dr. David J. Livingston, President, Lourdes University
Project Director/s	Anjali Gray, Chair, Department of Biology and Health Sciences, Lourdes University 6832 Convent Blvd., Sylvania, OH 43560 419-517-8876, agray@lourdes.edu Douglas Leaman, Chair, Department of Biological Sciences, University of Toledo Wolfe Hall, 3050 West Towerview Blvd., Toledo, OH 43606 419-530-2065, douglas.leaman@utoledo.edu
Are any of the applicants represented by a member https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/omi/2013-14_CEIA.pdf	N/A
1) Certification by Authorized Official:	
To the best of my knowledge and belief, the information contained in this application is true and correct. The document has been duly authorized to comply with the required assurances.	
Signature of Authorized Official	
Typed Name and Title: Dr. David J. Livingston, President	
Date	11/20/13
2) Administering Entity:	
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3) Business Partners (please submit separate information for each partner)

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Company Name: NASA-Ohio Aerospace Institute

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Company Name: LexaMed Ltd.

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Company Name: Sterling Laboratories

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4) Educational Partners (please submit separate information for each partner)

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5) Other Partners (please submit separate information for each partner)

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Title: Executive Vice President

Address: 300 Madison Ave., Suite 200, Toledo, Ohio, 43604-1575

Email: charlene.page@toledochamber.com

Name: Ohio Cooperative Education Association (OCEA)

Contact Person: Stacey Hummeldorf

Title: OCEA President, 2013-14, Assistant Professor, Division of Professional Practice and Experiential Education (Marketing and Real Estate Co-op)

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E-mail: staceyhummeldorf@uc.edu

<u>Program Snapshot</u>	<u>Name, Number or Amount</u>
JobsOhio key industry/ies – please list	Biohealth, Research and Development, Food Processing
JobsOhio region	Northwest Ohio (Regional Growth Partnership)
Amount of state money requested	255000
Required match money committed (100% undergrad & 150% grad programs)	255300
Total state money requested divided by number of co-ops or internships created (in whole dollars)	5100
Total match money obtained divided by number of co-ops/internships created (in whole dollars)	5106
Total money (state plus match) divided by number of co-ops/internships created (in whole dollars)	10206
Number of business partners	5
Number of education partners	1
Number of other partners	2

Add numeric value to each field below

	<u>TOTAL</u>	<u>Wages</u>	<u>Both wages & scholarships</u>	<u>For credit</u>	<u>Not for credit</u>	<u>Required</u>	<u>Optional</u>	<u>Transcripted (all)</u>
<u>Internships created (proposed)</u>	50	50	50	50	0	0	50	50
<u>Co-ops created (proposed)</u>	0	0	0	0	0	0	0	0
<u>TOTALS</u>	50	50	50	50	0	0	50	50

Abstract

Lourdes University (LU) is a small, private, liberal arts institution, rooted in Catholic and Franciscan traditions. Providing a values-centered education, LU enriches lives and advances academic excellence through the integration of the liberal arts and professional studies. The development of skills through academic curricula and experiential education to teach students the importance of professionalism, critical thinking, and career engagement and to enhance students' job prospects is a priority for this University. According to the National Association of Colleges and Employers in the Job Outlook 2014 survey, "soft" skills and attributes employers value include: the ability to work in a team, solve problems, and organize work. This survey is a forecast of hiring intentions of employers as they relate to graduates of the Class of 2013-14. These skills, high GPA, and engagement in experiential education match the profile of a LU student.

As part of our Quality Initiative for the Higher Learning Commission, LU is focusing on a new enrollment strategic plan. Internships play a crucial role in our Initiative objectives. Our vision is to provide some form of experiential learning, most specifically internships, for every student. To that end, LU is collaborating with its larger neighbor, the University of Toledo (UT), on an internship proposal focusing on biological sciences majors.

The mission of UT is to improve the human condition; to advance knowledge through excellence in learning, discovery and engagement; and to serve as a diverse, student-centered public metropolitan research university. As a research institution, UT serves a different population than that of LU. However, at both institutions, internships provide an excellent pathway for attracting students to Ohio schools and retaining them here once they graduate. Given the state of both higher education and the economy, collaboration benefits everyone involved.

The Lourdes Quality Initiative would roll out over a two year period in conjunction with the timing of the Ohio Means Internships and Co-ops (OMIC) grant. Support received from the OMIC grant will provide the necessary means to launch this mutual internship program between LU and its more experienced partner. Larger institutions such as UT have been engaged in internship and co-op practices for several years in particular colleges, such as that of engineering. Smaller universities like LU also have a lot to offer Ohio businesses if we are able to build a comprehensive internship program and the necessary ties with state businesses. UT has that history; however, a full-fledged internship program is new territory for its Biological Sciences Department, just as it is for the College of Arts and Sciences Department of Biology and Health Sciences at LU.

Therefore, OMIC support will encourage the following:

- Building needed infrastructure in our respective colleges – LU Arts and Sciences and UT's Natural Sciences and Mathematics – starting specifically with our departments of biology and then expanding to the Colleges as a whole.
- Developing partnerships with new and already existing JobsOhio businesses.
- Creating learning opportunities for students making content acquired during internships relevant to their careers.
- Providing internships for Lourdes University and University of Toledo students in the JobsOhio target industries of biohealth, food processing and research and development.
- Recruiting and training of faculty unfamiliar with the importance of or the logistics of the internship process, as well as initiating new course opportunities for both faculty and students.
- Attracting students to and retaining them at Ohio universities.
- Increasing student job prospects within the state upon graduation.

Proposed Program Narrative

Relevancy

1. How is the institution building partnerships with private companies to address emerging workforce needs?

Students attracted to biology as a major include those with strong interests in medical and professional schools. The Department of Biology and Health Sciences at Lourdes University (LU) encompasses one of the largest majors (88 students) in the College of Arts and Sciences. The Department of Biological Sciences at the University of Toledo (UT) houses 624 students and shares a similar mission, promoting experiential education to all students. Shadowing opportunities and volunteer work have always been a part of the LU/UT students' experiences; internships are recommended but not required, and thus rarely completed. After initial consultation and the decision to partner, LU Department of Biology and Health Sciences, LU Career Services, and UT Department of Biological Sciences identified two common goals: 1) Both institutions have made internships a priority and plan to make experiential education an integral component of each student's college career, and 2) Retention of biological sciences majors is critical; connecting these students to key JobsOhio industries is one way to enhance retention by providing exposure to wide ranging career options. With the large number of biological sciences majors and the commonalities between the partnering institutions, building collaborations with private companies in biohealth, food processing, and research and development is a logical and beneficial association.

Ohio-based companies with a focus in biohealth, food processing, and research and development encompass:

- 17% of All Clinical Trials in the U.S. are hosted in Ohio, ranking us 1st in the Midwest U.S. and 7th nationally.
- More than 640 medical and testing laboratories.
- Industry leaders in fruit and vegetable processing, animal foods, dairy production, and numbers of bakeries.

Employers recognize both LU and UT students and their dedication to community, service and research. Last year, 95 internship positions were posted on College Central, LU's on-line job and internship database. Of the 95 internship positions, 48 aligned with the JobsOhio industry areas (financial services and back office business functions), but zero aligned with biohealth, food processing, and research and development. Concurrently, UT offered 50+ students the opportunity to conduct research in its labs, but with over 620 biological sciences students, career development needs are not satisfied. After initial research and informal phone and face to face conversations with targeted employers and our partner, UT, three themes emerged: 1) biology majors need both career exploration and skill development for biology-related career options; 2) Internship preparation is essential to acquiring a related career experience during college; and 3) Internship development and coordination in biohealth, career fields are critical to helping employers meet workforce needs.

To support the employer partners, LU and UT will develop a web-based training on internship on job search topics, branding, and recruiting strategies, including diversity recruiting. This portal will be available 24/7 to support changing and emerging workforce needs. To assist with branding companies' names, especially smaller-medium businesses, LU/UT will integrate employers in Internship Preparation Courses (one at each institution) and additional classes

within the LU/UT biological sciences curriculums. Finally, special invitations to the Ohio Cooperative Education Association Conference will be extended to all employer partners.

2. What steps have been taken to assist faculty with program development to ensure relevancy in the curriculum?

At Lourdes University, we have recently revised and updated our Bachelor of Science (BS) in Biology curriculum to prepare students for graduate school, professional schools, and other health related programs. Our students will now take a set of required core courses that include cell biology, genetics, and microbiology, and then, depending on their future interest, students will choose courses from one of the three available tracks: Cell/Molecular, Health, or General Biology; however, our students do not get an opportunity to do hands-on research, and we also do not have an internship program.

The curriculum for the BS in Biology at the University of Toledo is ideally suited for students targeting professional schools (Medical, Veterinary, Optometry, Dental, or Physician Assistant), graduate schools, or the biohealth workforce. UT has specifically designed and tailored its curriculum to: cover prerequisites for those options; expose students to a variety of topics related to molecular biology, cell biology, and physiology at the cellular and organismal levels; and provide students with hands-on research experience. UT has also developed specialty Medical Technology and Bioinformatics programs to steer students toward high demand fields. However, the UT BS Biology program is currently lacking a cohesive internship program to address the needs of students interested in entering the workforce directly from their baccalaureate program.

Because of this deficiency in both programs, we propose to establish a pilot program to match LU and UT students with academic year or summer internship opportunities in the biohealth, food processing and research and development arenas. These will include private biomedical research and testing firms, product safety firms or divisions, biomedical device development or testing, and quality control positions within large food and pharmaceutical manufacturing firms. To assist in the placement of students from the program, we propose to hire an internship coordinator that will help to: develop relationships with Ohio businesses in our JobsOhio target industries seeking interns; educate students on the opportunities available and matching them up with openings that meet their career objectives; and develop student skills needed to secure a position in their field of choice.

Related to this latter point, a critical component of this proposed curricular change is the development of a course to prepare students for the process of identifying a suitable internship position, to guide them in the application process, and to generally enhance their internship skills and experience. A tentative syllabus of the new addition to the curriculum, *Internship Preparation Course* (BIO 299), to be developed at LU is attached in the appendix section. A similar new course at UT, tentatively titled *Professional Development in Biology* (BIOL 3910), will also emphasize other skills required for students seeking employment in the biohealth private sector job market.

The internship coordinator, in conjunction with personnel from the respective Career Services offices, will also be responsible for developing training modules to better educate faculty on the internship process and intern tracking.

3. How is the proposal integrated into the strengths of the regional economy?

According to the Toledo Regional Chamber of Commerce website, the Northwest Ohio region is home to approximately 130 member organizations with connections to the following industries: medical, environmental, food processing, healthcare, and research and development. Additionally, after reviewing <http://jobs-ohio.com/biohealth/>, counties in Northwest Ohio support over such 76 organizations. With the backing from the Toledo Regional Chamber of Commerce for the LU/UT OMIC partnership, and through support of this grant, LU and UT will integrate within the regional economy by:

- Promoting the benefits of membership at the regional Chamber through conversations with current employer partners and potential new employer collaborators.
- Utilizing Lourdes University and University of Toledo faculty talent and expertise to promote and undertake research on trends in bioscience, biohealth and food and agriculture.
- Collaborating with the Toledo Regional Chamber of Commerce to consult with member businesses on their recruitment needs, which could include presentations on diversity recruitment, developing an internship program, integrating entry level employers into the workplace, and other relevant topics.
- Promoting professional development opportunities, including the Ohio Cooperative Education Association 2015 Conference, to be held in Northwest Ohio.

Students in the respective internship courses will conduct shadowing experiences on a limited scale with smaller to medium size businesses in the local area. Some of these experiences will be highlighted in the Lourdes magazine *AtLourdes* and on the universities' websites. The shadowing helps smaller businesses become familiar with the potential benefits of interns as well as local talent, while, at the same time, raising awareness of these businesses, giving them a boost as well. Anecdotal evidence gathered through phone conversations with potential employer partners indicates that there are numerous small (1-10 staff member) organizations that may not be able to support an internship, but could provide shadowing experiences for students.

Although the focus of this section targeted the Northwest Ohio region, engagement with businesses is occurring throughout the state of Ohio as is demonstrated by our employer partners. The student talent pool from LU and UT expands over a greater area than Northwest Ohio; therefore, the LU/UT partnership will utilize the internship coordinator position to develop new relationships with organizations around the state.

4. What steps will the institution take to regularly assess and improve student learning outcomes?

Regular assessment to which Lourdes University and the University of Toledo respond in order to improve student learning is essential. Our two universities are intentional in our practice of "closing the assessment loop" and have several strategies in place to keep all stakeholders involved.

The LU registrar will manage student demographic and course metrics information, and assessments will be housed with the Director of Institutional Research. Assessment at UT is directed by the Vice Provost for Faculty Relations, Accreditation, Assessment, and Program

Review and the university-wide assessment process is overseen by the University Assessment Committee (UAC). All academic programs as well as student services units submit annual reports on assessment of student learning to the UAC.

Students and employers will complete formative evaluations midway through the internship experience. The formative ones are based on an internship evaluation form drafted by the Lourdes Psychology Department and clusters questions around Professionalism, Training, Job Requirements, and Initiative. Students are evaluated using a rubric of 5 categories ranging from Always to Never. They will repeat the process at the end of the experience for a summative evaluation, which includes questions from the formative evaluation with additional questions drawn from University Learning Outcomes (LU) (see Appendix) or Program Student Learning Outcomes (UT). Employers will submit both formative and summative evaluations electronically through our respective websites. Both evaluations will also ask open ended questions to elicit qualitative data as well. We ask for: 1) a description of the student's accomplishments, 2) a discussion of his/her performance overall, and 3) whether the student was effectively academically prepared.

If the student has enrolled in the internship preparation course, s/he will have written a pre-essay before beginning his/her internship (see Appendix). The post-essay completes the process for these students. Students write a reflective post-essay once their internship is completed addressing similar open ended questions about their experience and what they learned. In this essay, they document their knowledge and the overall quality of their internship and relationship with their employers. These student artefacts will be collected through an internship site in our electronic course platform, Sakai at LU and Blackboard at UT. At the end of each year, the essays will be reviewed by the biology department with results reported to the Assessment Committee.

All LU students who participate in an internship will be required to participate in the Annual Research Symposium, presenting a poster session in conjunction with the overseeing faculty member. Employers will be invited to attend as well as our colleagues and their interns from UT. This material will also be available as part of the grant report to OMIC.

5. How will work-based learning opportunities be integrated into students' academic programs to bridge their career goals?

Lourdes University does not have the funding or the infrastructure to start even a modest undergraduate research program. In the past, a majority of our majors also have been non-traditional students, for whom an internship wasn't a viable possibility. However, with a growing traditional age population, LU plans to incorporate internship opportunities in the curriculum.

The Department of Biological Sciences at UT has a long-running undergraduate research program that is integral to the BS in Biology, and a majority of pre-professional students take advantage of this opportunity. Although UT would like to require experiential learning as a component of the degree program, limitations have been that undergraduate research is labor intensive, expensive, and requires sufficient numbers of laboratories to accommodate all undergraduate students. With 624 biology majors and 18 research labs, this is problematic, even when incorporating research labs from other biomedical departments within the university.

The internship options afforded by this funding mechanism would provide experiential learning opportunities beyond those currently available and expose students to career opportunities they might otherwise not have considered. Likewise, it will serve as a strong recruiting tool to attract regional students to our programs, based on feedback from the engineering programs at UT who have required internships (co-op) for many years. Their data have identified the required internships as the second most cited reason for students choosing UT over other engineering programs.

Curricular integration: UT's Department of Biological Sciences offers *Undergraduate Research* (BIOL 4910) and *Internship in Biology* (BIOL 4950), call numbers that would be utilized for the majority of students seeking experiential learning. They also offer *Extramural Research* (BIOL 4940) for students working in laboratories at other institutions and a wide range of Clinical Externship requirements for students in the department's Medical Technology program. UT also offers an exploratory course to introduce students (typically second year majors) to research in the department. *Biological Research* (BIOL 2910) includes presentations from the department's research-active faculty and discusses what undergraduate research entails as well as how it can benefit students and fit into their career goals. As described in response to question 2. above, UT will develop a companion course, *Professional Development in Biology* (BIOL 3910), to target students seeking internship opportunities and, ultimately, employment. Incorporation of the BIOL 3910 course and BIOL 4950 credits will contribute to the upper-division electives required of all Biology students.

At LU, Biology majors take *Introduction to Research* (BIO 402) in their junior/senior year which is a pre-requirement for the capstone course, *Biology Seminar* (BIO 410). Due to the lack of funding, space, and infrastructure, most students perform a literature research as opposed to the more preferable hands-on research. The proposed new course, *Internship Preparation Course* (BIO 299), will be an upper level elective for all Biology majors.

The impact of undergraduate research on student preparation for post-graduate activities is clear. UT has tracked GPAs of students in the program who do and do not participate in research. For example, from 2010-2012, UT graduates who participated in undergraduate research had an average GPA of 3.50 (n=52), while those who did not had an average GPA of 3.15 (n=147). This difference was statistically significant ($p=1.4 \times 10^{-6}$, t-test). Extending and expanding these opportunities beyond our current capacity is necessary for continued student development and success at both LU and UT.

Sustainability

1. What is your financial plan and budget to support the program beyond the grant?

Lourdes University and the University of Toledo will use a variety of sources to support activities beyond the grant period, including:

- Internship/Job Fair revenue
- Private funds (contributions, foundation grants)
- Employers sponsorship opportunities
- State Share of Instruction (University of Toledo)
- Tuition revenue resulting from improved student retention
- Student fees

Included as an Appendix is a draft sustainability budget for three years post-grant that provides a breakdown of both anticipated expenses and revenue sources to continue and expand the Internship Coordinator position and the courses initiated during the grant period. This budget projects continuation of the shared full-time coordination for the first year post-grant, a .5 FTE coordinator at LU and a full-time coordinator at UT for the second year, and a full-time coordinator at each institution during the third year.

Sustainability efforts including private contributions and grant funds will be coordinated at LU with the Department of Institutional Advancement. Prospective sources will include LU's robust lists of alumni, friends, contributors, local and regional community and family foundations, corporations, and other private sources. Government grant sources may also be utilized if available.

The College of Natural Sciences and Mathematics at UT currently has a partial base-budgeted salary line for an internship fee (proposed to be \$500, but must be approved) that is projected to cover approximately half of the coordinator's salary. The full-time Internship Coordinator at UT will oversee all internships for undergraduates in the College of Natural Sciences and Mathematics (~1,000 students) as well as for students enrolled in Professional Science Masters (PSM) programs in the College. All PSM programs include a required internship component. Currently there is one such program in place: the PSM in Photovoltaics and a second PSM in Green Chemistry is going through the approval process. Additional PSM programs in Biotechnology, Environmental Sciences, and Mathematics, Statistics, and Data Science are in the planning stages.

2. What program assessment actions will be taken to improve and grow learning outcomes for students, business participation, and overall program success?

Using the results from the assessments conducted during the two years of the grant cycle, our universities will revise the internship preparation course, the employer surveys, and the journaling process as needed. In addition, the project will go through the rigorous assessment process currently in place for all projects in the College of Arts and Sciences at Lourdes University (see Appendix).

The course as part of the learning experience includes job shadowing at smaller businesses which might not be able to hire interns. As we move into future incarnations of the course, we intend to include videography of experts in the field and interviews as well. These would be archived and available to future students and teachers and aid in developing greater business participation as well as shared through social media outlets. Additionally, that student-generated material would be available to the OMIC grant site.

Another piece of the course is to use LinkedIn as a mechanism for job tracking and sourcing. As these students who have performed internships graduate and move into the job market, we propose to track them through LinkedIn. The results of this longitudinal study will reveal whether students do, indeed, remain in Ohio, and if their internship experiences led to jobs in their fields. This assessment data is crucial if we are to understand the efficacy of an internship program. LinkedIn will also be utilized as a method to grow business participation through sourcing for new company information.

Decision-making will be aligned with organizational processes: soliciting data from students, employers, faculty, and staff; analyzing said data, and sharing results as part of the feedback loop. Faculty needs to be informed not just on the success of the internship itself, but also on the student learning outcome post-graduation. Did the student find biohealth-related employment? Did s/he remain in Ohio? Tracking the answers to these questions is a part of our longitudinal plan. Utilizing the on-line career management software systems on the respective campuses, the personnel can track both internship and job placements. LU Career Services will utilize College Central, and UT's Career Services office will utilize NaceLink for tracking.

3. What are the plans to support the program through infrastructure, advising and data management?

The internship coordinator position is integral to the success of this program at both Lourdes University and the University of Toledo. Neither program currently has an individual in place or on staff who has the ability or time to undertake this task. Together we thus will hire a full time individual to assist in the implementation and sustainability of this important new program at Lourdes University and the University of Toledo. Minimal qualifications for the position are a degree in a life science field, preferably biology (either cell/molecular or organismal biology), along with some experience in student management, either as a human resources employee or lab or class coordinator. Minimal duties would include identifying internship opportunities by contacting Ohio biohealth, research and development and food processing companies, working with these companies to identify placements for students, working with students to prepare them for expectations within their internship positions, and acting as a clearinghouse for feedback (from both students and employers) about the experience. Although the coordinator would likely not be a classroom instructor (for example, in the BIOL 3910 course), s/he would work closely with faculty members in charge of that course to ensure students are receiving the appropriate information and guidance before undertaking the new activity of interning. In addition to the internship coordinator, academic advisors in both departments will be encouraged to get students involved in the internship program and will be trained on the appropriate use of the curricular options available.

The infrastructure supported through requested grant funds is designed as a pilot to demonstrate the effectiveness, value, and demand for internships not only in the three targeted JobsOhio industries highlighted during the grant period, but in other disciplines within the College of Arts and Sciences at Lourdes University and the College of Natural Sciences and Mathematics at the University of Toledo. By establishing the necessary employer relationships to support internships, shadowing, and other activities during the grant period, the infrastructure will be developed to establish the shared Internship Coordinator as a permanent part of the structure at both institutions. Ultimately, a full-time Internship Coordinator position is desired at each institution, as illustrated in the sustainability budget included as an Appendix. The two-year project period is designed to provide the foundation for the goal of permanent full-time positions at both LU and UT.

4. How will the institution develop and sustain its faculty engagement?

The Department of Biology and Health Sciences at Lourdes focuses on faculty development and includes a diverse faculty. LU includes an internationally recognized Anatomy & Physiology textbook author, several Ph.D. trained researchers, a medical doctor, and a dentist. In the past five years, three of our faculty members have won the Lourdes University Faculty Excellence

Award. In the past three years, two of our faculty members have been granted sabbatical leaves to work on their areas of scholarship. One of our faculty members serves as a member of the Toledo-Lucas County Sustainability Commission (TLCSC) to help finalize the sustainability plan for Toledo and Lucas County and to advance the sustainability of this region. In addition to writing multiple textbooks, one of our faculty members serves on the Curriculum and Instruction Committee of the national Human Anatomy and Physiology Society (HAPS). Another of our faculty members serves on the editorial board of *BioScene*, a journal published by the Association of College and University Biology Educators (ACUBE). One of our faculty members serves on the Advisory Board for the NorthWest Ohio Center for Excellence in STEM Education. Professional development monies for faculty-student work on internships will be made available through our Faculty Life committee to encourage faculty engagement. Institutional support will also be available at every level as LU strives to meet its Quality Initiative objectives.

The Department of Biological Sciences at UT has a long history of support for faculty instructional development and recognition for outstanding instruction. Over the past ten years, four faculty members have been recognized as “Master Teachers,” three have received “Outstanding Teaching” awards, one has been awarded a college level “Excellence in Teaching” award, and two others received student-nominated recognition for teaching prowess. Against this background, the program also sent four faculty to the 2013 Northstar Summer Institute on Scientific Teach sponsored by the Howard Hughes Medical Institutes and National Academies. This conference presented the latest approaches in active learning and retention methods in STEM arenas, strategies that included discussions on the importance of experiential learning. The four UT participants of that conference have been tasked with distributing the knowledge gained back to the home institution, and have taken this assignment seriously. This fall alone, these participants have planned and/or given four presentations on the topic, with more planned this spring. By sending an additional 2-4 faculty to the conference in 2014, and undertaking a complete transformation of the department’s curricular delivery methods over the next few years, the goal is to enhance retention in STEM arenas, which integrates well with that of OMIC mechanism.

Beyond these pedagogical and programmatic investments, UT’s “Imagine 2017” document outlines the Provost’s strategic plan highlighting experiential learning as one of the main objectives, with the goal of branding the University of Toledo as the “University of Experiential Learning.” Because of this, there will be significant institutional support for programs that intend to establish and/or expand existing offerings. Thus, the goals of this proposal align precisely with those of the host institution.

5. How will the institution develop and sustain its capabilities in job development and business participation?

Sustaining and developing jobs and employer relationships within the JobsOhio industries will be critical as the grant cycle ends in the spring of 2016. A mechanism and model to develop and sustain employer relationships and business participation has been created to support current employer partners and expand to new partners, assisting with workforce needs and growing student internships. The model includes a four step process:

- 1) Conduct a SWOT assessment on employers’ current relationship with the institutions.
 - **S:** Strengths of current employer relationship (e.g established internship program, well-known name and brand on campus)

- **W:** Weaknesses in employers' approaches to develop relationships with LU and UT students.
 - **O:** Institutions will share best practices and opportunities with companies to assist with branding, internship program development, etc.
 - **T:** Identify any threats associated with current employer relationships (e.g. unpaid internships and the bureau of labor guidelines, unrealistic work expectations for internships)
- 2) Develop and maintain relationships with current employers and target new employers utilizing the internal and external strategies outlined below.
 - 3) Partner with Institutional Advancement on training biological sciences faculty and staff on "selling" the institutions and students to potential employers.
 - 4) Reassess the employers' relationship with the partner institutions close the feedback loop. (complete SWOT at the conclusion of each semester or year with targeted employers to determine any change in status, both positive and negative)

Internal strategies include:

- Connecting with biological sciences faculty members at Lourdes University and the University of Toledo to inquire about alumni/employer referrals based on their research, consulting work, professional networks, and service learning projects
- Communicating with University personnel (connections from Alumni Affairs, Career services, and employers who serve on advisory boards)
- Creating contacts from students (e.g. student had positive internship experience not previously recorded on their transcript, harvesting employer leads from student resumes, answering student questions arising from current internship placement)

External strategies include:

- Communicating with employers at community events (participation in Chamber of Commerce, professional associations, etc.), Career Services events (job and internship fairs, workshops, employer panels, site visits and on-campus recruiting visits), University events (partnering with Alumni Affairs, faculty or student sponsored workshops and organizations)
- Connecting with current employers fitting within the JobsOhio industries but who currently do not recruit biological sciences students (e.g. Center for Innovative Food Technology currently recruits marketing and communication interns; therefore, expand internship opportunities to include quality control and research and development)
- Utilizing College Central (Lourdes University's on-line job and internship database and University of Toledo's NACE Link to source out additional employer leads)

In conclusion, the OMIC partnership between Lourdes University and University of Toledo will make learning relevant for students and businesses through the use of internships. The infrastructure, including an internship preparation course and internship coordinator position, will address biohealth, food processing, and research and development workforce needs. Support from faculty members and administrators on the neighboring campuses will create synergy to continue collaboration and build employer commitments throughout and beyond the two year grant cycle.

Budget Narrative

Personnel: Personnel expenses budgeted include the cost for salaries and benefits to support a full-time Internship Coordinator position to work with both Lourdes University and the University of Toledo. Salary expenses for this position are calculated at a salary of \$35,000 for two years. Fringe benefits are calculated using the current Lourdes University rate of 37 percent of salary. Regent funds are requested to cover the salary and benefits expenses for this position. The position will spend approximately 75 percent of time at UT and 25 percent at LU.

$\$35,000 * 2 \text{ years} = \$70,000$

$\$70,000 * .37 \text{ fringe rate} = \$25,900$

Total personnel = \$95,000

Supplies: Supply expenses budgeted include general supplies required to prepare for and conduct the Internship Preparation Courses as well as general office supplies for the Internship Coordinator position. Expenses are based on previous experience. Regent funds are requested to cover the supply expenses.

Total supplies = \$2,500

Travel: Travel expenses budgeted include local travel for the Internship Coordinator. Expenses are based on approximately 75-100 miles per month at a reimbursement rate of \$.55 per mile. Regent funds are requested for travel expenses.

Total travel = \$1,000

Employer Salaries: Employer salary expenses are projected based on current employer letters received and projected additional internships to be secured throughout the grant period. Salaries are budgeted to be split evenly between employers and Regent funds at \$114,300 requested from Regent funds and \$114,300 to be provided by employers. Additional detail about the calculation of the employer portion of expenses can be found in the individual employer letters included in the Appendices. Approximately 40 of the proposed internships will be provided for UT students and approximately 10 for LU students.

$\$4,572 \text{ projected average per intern} * 50 \text{ projected interns} = \$228,600$

Other Employer Contributions: Expenses budgeted for other employer contributions include the direct costs of employers as project by current employer letters received and projected additional internships to be secured throughout the grant period. Additional detail about the calculation of the other employer contributions can be found in the individual employer letters included in the Appendices.

$\$2,820 \text{ projected average employer contribution per intern} * 50 \text{ projected total interns} = \$141,000$

Subtotal: Total direct expenses budgeted including items in the above categories equal \$434,400 with \$217,200 requested from Regent funds and \$217,200 provided by business funds as described above.

Indirect: Indirect costs are budgeted at 8 percent of direct expenses for purposes of this proposal at a total of \$37,800. Regent funds are requested for indirect costs.

TOTAL: Total expenses budgeted including items in the above categories equal \$510,300 with \$255,000 requested from Regent funds and \$255,300 provided by business funds as described above.

Appendices

- Budget

- Business Partners Snapshot

- Letters of Commitment from all Business and Other Partners
 - Orbital Research
 - NASA – Ohio Aerospace Institute
 - LexaMed Ltd.
 - Sterling Laboratories
 - Center for Innovative Food Technology
 - Toledo Chamber of Commerce
 - Ohio Cooperative Education Association
 - Lourdes University and University of Toledo Partnership Agreement Letter

- Additional Items
 - Anjali Gray – Short CV
 - Douglas Leaman – Short CV
 - LU Course Syllabus
 - Intern Application
 - Intern Entrance Paper
 - Intern Time Log
 - LU College of Arts and Sciences - Assessment Plan Table
 - LU College of Arts and Sciences - Assessment Report Form
 - LU College of Arts and Sciences - Course Report Form
 - LU Organizational Chart
 - LU Learning Goals and Outcomes
 - Sustainability Budget
 - Job Fair Flyer
 - Implementation Schedule

Activity	Total	Regents Funds	Business Funds*	Applicant Funds	Education Partner Funds	Name of Education Partners	Other Partner Funds	Name of Other Partners
Personnel	95900	95900	0			University of Toledo		OCEA, Toledo Chamber
Supplies	2500	2500	0					
Purchased Services	3500	3500	0					
Travel	1000	1000	0					
Scholarships	0	0	0					
Employer Salaries	228600	114300	114300					
Other Employer Contributions	141000	0	141000					
Other (Describe)	0	0	0					
Subtotal	472500	217200	255300					
Indirect Costs 8% or less	37800	37800	0					
TOTAL	510300	255000	255300	0	0		0	

*Equal to or greater than 100% of requested state money for undergrad programs and 150% for grad programs

Employer Name	Total Intern & Co-op Wages	# of Intern Positions	# of Co-op Positions	Amount of Other Employer Contributions
Orbital Research Inc.	9600	2	0	4000
NASA, Ohio Aerospace Institute	72000	10	0	27600
LexaMed	4500	2	0	6725
Sterling Laboratories	13680	6	0	20400
Center for Innovative Food Technologies	14520	6		20400
Total # of Employers Goes Here	114300	26	0	79125

November 7, 2013

Chancellor Carey and Review Board
Ohio Means Internships & Co-ops
University System of Ohio
Ohio Board of Regents

Dear Chancellor Carey and Review Board:

On behalf of Orbital Research Inc., I write to express strong support for the **Ohio Means Internships & Co-ops** (OMIC) proposal jointly prepared by Lourdes University and The University of Toledo. We support and endorse the proposal to increase the number of new co-op and internship opportunities available to Lourdes University and University of Toledo students.

Most recently, we had the pleasure of employing a University of Toledo graduate as a Biomedical Engineering Intern this past summer who had returned to us for a second year. He had the opportunity to work in various areas throughout our company including our Medical Devices department along with our Aerospace Division. He was instrumental in the human subjects testing for our FDA approved dry electrodes in addition to assisting with our live fire tests. We found the experience with the intern to be greatly enriching on both sides as he was able to bring a youthful outlook to our workforce and our programs.

For the duration of the grant, we would have a maximum of two (2) internships available with the 50% wage reimbursement through the grant from OMIC. The estimated earnings for our interns vary based on education and experience. Based on our previous experience, the hourly rate paid for interns range from \$11-\$20. Our interns work closely with Senior Engineering staff members and are assigned a Mentor/Supervisor to guide them through this internship. In-kind support would total \$2,000 for the year, and for other administrative costs associated with employing interns also total \$2,000.

Description	Value
Number of new co-ops/internships to be created if subsidized up to 50% with proceeds of the OMIC grant:	2
Total estimated earnings of students participating new in co-ops/internships listed above	\$5,280-\$9,600*
Amount of in-kind support attributed to staff supervising, mentoring, and training students participating in new co-ops and internships	\$2,000
Other administrative costs associated with employing co-op/internship students	\$2,000

*Based on 12-week schedule

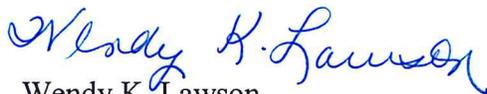
Over the years, we have had interns from all disciplines as it relates to engineering, many of whom major in Biomedical Engineering, Mechanical Engineering, Electrical Engineering, Aerospace Engineering, Legal and MBA's. In a small company like Orbital Research Inc., the opportunities are endless for those willing to put the time and energy into excelling and finding feasible solutions for the many technological challenges presented daily. Our customers include the Department of Defense, National Institutes of Health, National Science Foundation, the Medical Device industry, the Aerospace industry, major colleges and universities, and other small businesses just like Orbital Research Inc.

We are excited for the opportunity to be a partner in the Governor's plan to grow co-ops and internships for Ohio, and welcome the opportunity to participate with Lourdes University and The University of Toledo.

Orbital Research Inc. retains the right and responsibility to increase or decrease the number of opportunities/students based on changes in market conditions, institutional needs, and availability of eligible/qualified students.

Please contact me at 216-649-0399 or lawson@orbitalresearch.com for any additional questions you may have.

Sincerely,
Orbital Research Inc.



Wendy K. Lawson
Manager, Human Resources & Administration



Chancellor Carey and Review Board
Ohio Means Internships & Co-ops
Ohio Board of Regents

November 18, 2013

Dear Chancellor Carey and Review Board:

On behalf of *Ohio Aerospace Institute*, I write to express strong support for the **Ohio Means Internships & Co-ops** (OMIC) proposal jointly prepared by Lourdes University and The University of Toledo. We support and endorse the proposal to increase the number of new co-op and internship opportunities available to Lourdes University and University of Toledo students.

Through the duration of the grant, we could have a maximum of ten (10) internships available with a 50% wage reimbursement through the OMIC grant. The estimated earnings for interns would vary based on education and experience with an average wage of \$11-15/hour. In-kind support would include the training and supervision of the intern, along with replacement of laboratory chemicals, equipment and supplies. See below for details.

Description	Value
Number of new co-ops/internships to be created if subsidized up to 50% with proceeds of the OMIC grant	10
Total estimated earnings of students participating new in co-ops/internships listed above \$11-\$15/hour at 40 hours/week for 10-12 weeks) = \$4400 - \$7200 x 10 interns	\$44,000- 72,000
Total = \$44,000 - \$72,000	
Amount of in-kind support attributed to staff supervising, mentoring, and training students participating in new co-ops and internships	\$19,800-
Training: (\$75/hour* x 8 hours x 3 days) = \$1800 x 6 (4 semesters and 2 summers) = \$10800	\$21,600
Supervision during fall, spring and summer semesters: (\$75/hour x 2 hours x 10-12 weeks) = \$1500-\$1800 x 6 semesters = \$9000-\$10800	
Total: \$19800-\$21600	
*\$75 accounts for wage, fringe and loss of productivity of the supervisor	
Other administrative costs associated with employing co-op/internship students	\$ 6000
Replacement of laboratory chemicals, equipment, and supplies \$1000 x 6 (4 semesters and 2 summers)= \$6000	
Note: This would be based on 10-12 week internships at 40 hours/week	

The interns will complete research and development, engineering and manufacturing tasks.

We are excited for the opportunity to be a partner in the Governor's plan to grow co-ops and internships for Ohio, and welcome the opportunity to participate with Lourdes University and The University of Toledo.

Ohio Aerospace Institute retains the right and responsibility to increase or decrease the number of opportunities/students based on changes in market conditions, institutional needs, and availability of eligible/qualified students.

Please feel free to contact me with any questions you may have, at (440) 962 -3030, or annheyward@oai.org.

Sincerely,

Ann O. Heyward
Vice President, Research and Educational Programs



Chancellor Carey and Review Board
 Ohio Means Internships & Co-ops
 University System of Ohio
 Ohio Board of Regents

Dear Chancellor Carey and Review Board:

On behalf of *LexaMed, Ltd.*, I write to express strong support for the **Ohio Means Internships & Co-ops** (OMIC) proposal jointly prepared by Lourdes University and The University of Toledo. We support and endorse the proposal to increase the number of new co-op and internship opportunities available to Lourdes University and University of Toledo students.

Through the duration of the grant, we could have a maximum of two (2) internships available with a 50% wage reimbursement through the OMIC grant. The estimated earnings for interns would vary based on education and experience with an average wage of \$11-15/hour. In-kind support would include the training and supervision of the intern, along with replacement of laboratory chemicals, equipment and supplies. See below for details.

Description	Value
Number of new co-ops/internships to be created if subsidized up to 50% with proceeds of the OMIC grant: (1 intern for 2 summers)	2
Total estimated earnings of students participating new in co-ops/internships listed above \$11-15/hour at 150 hours per summer (20 hours x 7.5 weeks) = \$1650-\$2250 x 2 summers = Total = \$3300-\$4500	\$3300-\$4500
Amount of in-kind support attributed to staff supervising, mentoring, and training students participating in new co-ops and internships Training: (\$75/hour* x 8 hours x 3 days) = \$1800 x 2 summers = \$3600 Supervision during the summers: (\$75/hour x 1 hour x 7.5 weeks) = \$562.5 x 2 summers = \$1125 Total: \$4725	\$4725
*\$75 accounts for wage, fringe and loss of productivity of the supervisor Other administrative costs associated with employing co-op/internship students Replacement of laboratory chemicals, equipment, and supplies \$1000 x 2 summers= \$2000	\$ 2000
<i>Note: This would be based on a 16-week semester and 12-week summer</i>	

The interns will be participating in research and development activities to assist the company with consulting and laboratory services to the biologics, pharmaceutical, nutraceutical, and medical device industries.

We are excited for the opportunity to be a partner in the Governor's plan to grow co-ops and internships for Ohio, and welcome the opportunity to participate with Lourdes University and The University of Toledo.

LexaMed, Ltd. retains the right and responsibility to increase or decrease the number of opportunities/students based on changes in market conditions, institutional needs, and availability of eligible/qualified students.

Sincerely,

Rocile Parton,
 Vice President Human Resources



STERLING LABORATORIES

6800 West Central Avenue Suite L1
Toledo, OH 43617

P 419.885.3183 • F 419.885.2314

www.sterlinglabsinc.com

November 18, 2013

Chancellor Carey and Review Board
Ohio Means Internships & Co-ops
University System of Ohio
Ohio Board of Regents

Dear Chancellor Carey and Review Board:

On behalf of *Sterling Consultants, Inc.*, I write to express strong support for the **Ohio Means Internships & Co-ops** (OMIC) proposal jointly prepared by Lourdes University and The University of Toledo. We support and endorse the proposal to increase the number of new co-op and internship opportunities available to Lourdes University and University of Toledo students.

Through the duration of the grant, we could have a maximum of six (6) internships available with a 50% wage reimbursement through the OMIC grant. The estimated earnings for interns would vary based on education and experience with an average wage of \$10/hour. In-kind support would include the training and supervision of the intern, along with replacement of laboratory chemicals, equipment and supplies. See below for details.

Description	Value
Number of new co-ops/internships to be created if subsidized up to 50% with proceeds of the OMIC grant: (1 intern for 4 semesters and 2 summers)	6
Total estimated earnings of students participating new in co-ops/internships listed above 4 semesters x \$2720/semester(\$10/hour at 17 hours/week) = \$9600 2 summers x \$2040/summer(\$10/hour at 17 hours/week) = \$4080 Total = \$13,680	\$13,680
Amount of in-kind support attributed to staff supervising, mentoring, and training students participating in new co-ops and internships Training: (\$75/hour* x 8 hours x 3 days) = \$1800 x 6 (4 semesters and 2 summers) = \$10800 Supervision during fall and spring semesters: (\$75/hour x 1 hour x 16 weeks) = \$1200 x 4 semesters = \$4800 Supervision during the summers: (\$75/hour x 1 hour x 12 weeks) = \$900 x 2 summers = \$1800 Total: \$17400	\$17,400
*\$75 accounts for wage, fringe and loss of productivity of the supervisor Other administrative costs associated with employing co-op/internship students Replacement of laboratory chemicals, equipment, and supplies \$500 x 6 (4 semesters and 2 summers)= \$3000 <i>Note: This would be based on a 16-week semester and 12-week summer</i>	\$ 3000

The interns will be participating in product evaluation, analysis and testing for a variety of cleaning products in the retail market.

We are excited for the opportunity to be a partner in the Governor's plan to grow co-ops and internships for Ohio, and welcome the opportunity to participate with Lourdes University and The University of Toledo.

Sterling Consultants, Inc. retains the right and responsibility to increase or decrease the number of opportunities/students based on changes in market conditions, institutional needs, and availability of eligible/qualified students.

Sincerely,

Tod A. Losey
Director of Laboratory Operation
Sterling Laboratories



Dear Chancellor Carey and Review Board:

On behalf of *The Center for Innovative Food Technology (CIFT)* I write to express strong support for the **Ohio Means Internships & Co-ops (OMIC)** proposal jointly prepared by Lourdes University and The University of Toledo. We support and endorse the proposal to increase the number of new co-op and internship opportunities available to Lourdes University and University of Toledo students.

Through the duration of the grant, we could have a maximum of six (6) internships available with a 50% wage reimbursement through the OMIC grant. The estimated earnings for interns would vary based on education and experience with an average wage of \$11/hour. In-kind support would include the training and supervision of the intern, along with the replacement of office supplies and additional administrative costs. See below for details.

Description	Value
Number of new co-ops/internships to be created if subsidized up to 50% with proceeds of the OMIC grant: (1 intern for 4 semesters and 2 summers)	6
Total estimated earnings of students participating new in co-ops/internships listed above	\$14,520
4 semesters x \$2640/semester(\$11/hour at 15 hours/week) = \$10560	
2 summers x \$1980/summer(\$11/hour at 15 hours/week) = \$3960	
Total = \$14520	
Amount of in-kind support attributed to staff supervising, mentoring, and training students participating in new co-ops and internships	\$17,400
Training: (\$75/hour* x 8 hours x 3 days) = \$1800 x 6 (4 semesters and 2 summers) = \$10800	
Supervision during fall and spring semesters: (\$75/hour x 1 hour x 16 weeks) = \$1200 x 4 semesters = \$4800	
Supervision during the summers: (\$75/hour x 1 hour x 12 weeks) = \$900 x 2 summers = \$1800	
Total: \$17400	
*\$75 accounts for wage, fringe and loss of productivity of the supervisor	
Other administrative costs associated with employing co-op/internship students \$500 x 6 (4 semesters and 2 summers)= \$3000	\$ 3000
Note: This would be based on a 16-week semester and 12-week summer	

The interns will complete the following activities:

- 1) Write/edit content for printed materials including flyers, newsletters, brochures, advertisements, speaker bios, signage, etc.*
- 2) Assist in maintaining large online database of contacts.*
- 3) Event planning.*
- 4) Organize and maintain news clippings and photo file (scan newspapers, websites to clip/photocopy articles pertaining to CIFT and/or the industry in general); maintain news binders and filing system for easy access to CIFT employees; create monthly media/advertising reports.*
- 5) Research and evaluate potential marketing opportunities for CIFT.*
- 6) Assist in maintaining timely website content.*
- 7) Ensuring media list remains up to date.*
- 8) Create media kits for CIFT events.*
- 9) Assist marketing and communications department in various projects.*
- 10) Perform other duties as directed (greeting guests at main desk, answering phones, handling mailings, organize mail, etc.).*

We are excited for the opportunity to be a partner in the Governor's plan to grow co-ops and internships for Ohio, and welcome the opportunity to participate with Lourdes University and The University of Toledo.

CIFT retains the right and responsibility to increase or decrease the number of opportunities/students based on changes in market conditions, institutional needs, and availability of eligible/qualified students.

Sincerely,

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

Rebecca Singer
Vice President and Director of Agricultural Programs



TOLEDO REGIONAL
Chamber of Commerce

300 Madison Ave., Ste. 200 Toledo, Ohio 43604-1575 419.243.8191 phone 419.241.8302 fax www.toledochamber.com

November 15, 2013

Chancellor Carey and Review Board
Ohio Means Internships & Co-ops
University System of Ohio
Ohio Board of Regents

Dear Chancellor Carey and Review Board:

On behalf of Toledo Regional Chamber of Commerce, I am pleased to announce our support for the **Ohio Means Internships & Co-ops** (OMIC) proposal jointly prepared by Lourdes University and The University of Toledo. We support and endorse the proposal to increase the number of new co-op and internship opportunities available to Lourdes University and University of Toledo students.

The Toledo Regional Chamber of Commerce is a local, independent organization made up of nearly 2,400 businesses that employ more than 140,000 people. Our member businesses range in size from small, one-person operations to large corporations employing thousands. This access to regional industry partners enables us to support UT and Lourdes University in their efforts by marketing the OMIC program to our membership

We also pledge our support by aligning the internship program we facilitate, through funds generously provided by Ohio Third Frontier, with UT's OMIC program. Currently, we are able to support their Biological Sciences students through our program and will be able to send interested businesses that do not fit into our STEM areas of interest to the Lourdes/UT program, helping more students and businesses in the Northwest Ohio Region. We seek not to compete with this program, but to work collaboratively, effectively helping more students and businesses, strengthening our region's workforce and economy.

We are happy to support this program. Please contact me if you have any questions.

Sincerely,

Wendy R. Gramza, CCE
Executive Vice President



Chancellor Carey and Review Board
Ohio Means Internships & Co-ops
University System of Ohio
Ohio Board of Regents

Dear Chancellor Carey and Review Board:

On behalf of the Ohio Cooperative Education Association, I write to express strong support for the **Ohio Means Internships & Co-ops** (OMIC) proposal jointly prepared by Lourdes University and The University of Toledo. We support and endorse the proposal to increase the number of new co-op and internship opportunities available to Lourdes University and University of Toledo students.

OCEA looks forward to and will encourage parties to present their findings from the OMIC grant at the 2015 and 2016 annual conferences. Additional opportunities to share information through other forums OCEA hosts such as workshops, webinars and roundtable discussions are also possible.

We work collaboratively and effectively with both Ohio institutions and employers, strengthening our region's workforce and economy.

We are happy to support this program and the Governor's plan to grow co-ops and internships for Ohio, and welcome the opportunity to participate with Lourdes University and The University of Toledo.

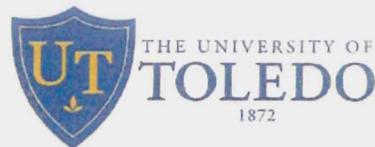
Sincerely,

Stacey Hummeldorf

Ohio Cooperative Education Association President, 2013-2014
Stacey.Hummeldorf@uc.edu
513-556-9073



Office of the President



November 18, 2013

This letter of agreement serves as a description of the working relationship between Lourdes University (Lourdes), as the applicant and lead for an Ohio Board of Regents, Ohio Means Internships & Co-ops (OMIC) grant, and the University of Toledo (UT), as described in the narrative included in Lourdes University's OMIC proposal.

The purpose of the Lourdes University OMIC project is increase experiential education opportunities for students in the biological sciences through internship opportunities and to retain biological science majors. The project elements include career exploration assistance for biological science majors, internship preparation, and internship development and coordination. These elements will be supported through infrastructure enhancements at Lourdes, including a full-time shared Internship Coordinator position and an Internship Preparation Course at each institution. As the applicant, Lourdes will be responsibility for the overall coordination of the project and assuring the successful completion of all objectives and deliverables. As a key collaborator and public institution partner, the University of Toledo will partner with Lourdes to implement the project, employing its resources as a public higher education institution.

To support the employer partners, Lourdes and UT will develop a web-based training on internship on job search topics, branding, recruiting strategies, including diversity recruiting. This portal will be available 24/7 to support the changing and emerging workforce needs of biohealth, agriculture/food processing and research and development employers. To assist with branding companies' names, especially the smaller-medium businesses, Lourdes and UT will integrate employers in the Internship Preparation Course and additional classes within the Lourdes and UT biological sciences curriculums. Finally, special invitations to the Ohio Cooperative Education Association Conference will be extended to all employer partners.

If funded, UT agrees to the following arrangements and grant-related deliverables:

1. Provide office space, computer usage, and appropriate office supplies for the Internship Coordinator to spend approximately 75 percent of time in the UT Department of Biological Sciences.
2. Provide documentation of time spent by the Internship Coordinator on the UT campus and on appropriate program activities for UT students.
3. Create and conduct an Internship Preparation Course (Professional Development in Biology, BIOL 3910) to target students seeking internship opportunities in BioHealth, including supplying instruction for the course.
4. Support the Internship Coordinator's efforts to develop new employer partnerships and expand available internships for biological science students.

6832 Convent Boulevard • Sylvania, Ohio 43560 • 419.824.3809 • www.lourdes.edu

Sponsored by the Sisters of St. Francis

5. Participate in the regular assessment activities to assess and improve student learning outcomes as well as business participation and overall program success.

In order to support this partnership, Lourdes is requesting OMIC funding for a full-time Internship Coordinator that will split time between the two institutions. This will be done through a sub-award to support .25 FTE at Lourdes and .75 FTE at UT. OMIC funding will be used to support salary and fringe benefits for the two-year grant period. The Internship Coordinator will be an employee of Lourdes and Lourdes will be responsible for administering payroll and benefits for this position.

The Internship Coordinator will have the following responsibilities:

- Facilitate placement of students with designated internship employers
- Serve as a liaison between the Department of Biological Sciences at UT and the Department of Biology and Health Sciences at Lourdes
- Assure that UT meets the requirements of the letter of agreement
- Work closely with project staff and faculty to develop opportunities for biological science students
- Assist with planning and implementing the Internship Preparation Courses at UT and Lourdes
- Facilitate project staff and faculty access to pertinent data for continuous improvement measures
- Identify and bring to attention potential problems between employers and students
- Facilitate communication between employers institutions to clarify internship objectives and prevent and remediate problems
- Provide data and input as needed for program and fiscal reports as required by OBR
- Participate in collecting and analyzing data for evaluating program effectiveness

It is our belief that a partnership between Lourdes and UT will result in a successful expansion of internship opportunities for biological science students at both institutions. By providing increase experiential learning opportunities at Lourdes and UT, the program is designed to improve retention rates of biological science majors, enhance employability of students, and ultimately increase the likelihood that these students will stay to live and work in Ohio after graduation.

Respectfully,



David J. Livingston, PhD
President, Lourdes University



James P. Trempe, PhD
Vice President for Research, University of Toledo

Short Form - CURRICULUM VITAE
Anjali D. Gray, Ph.D.

Professor & Department Chair
Dept. of Biology & Health Sciences,
Lourdes University,
6832 Convent Blvd.,
Sylvania, OH 43560

Phone: (419) 517-8876
FAX: (419) 882-3987
email: agray@lourdes.edu

Education:

Degree	University	Subject	Year
Post-doctoral Researcher	University of Toledo	Parasitology	2001- 2002
Ph. D.	University of Missouri- Columbia	Molecular genetics	1994 -2000
M.S.	Panjab University Chandigarh (India)	Biotechnology (5th in the Univ.)	1991-1993
B.S.	Kurukshetra University Kurukshetra (India)	Biology	1988-1991

Employment:

Professor & Department Chair	Lourdes University	2011 - present
Associate Professor & Department Chair	Lourdes College	2005- 2011
Visiting Assistant Professor & Lecturer	University of Toledo	2000-01, '02-'05

Courses Taught:

Cell biology, Genetics, Principles of Biology, Human Genetics, Immunology, Fundamentals of life sciences, Anatomy & Physiology I & II, Pathophysiology

My class sizes have ranged from 3 (Immunology) to 530 students (Fundamentals of Life Science).

Publications:

Hong Yao, **Anjali Dogra Gray**, Donald L. Auger, and James A. Birchler (2013) PNAS 110 (7) 2665-2669 Genomic dosage effects on heterosis in triploid maize

Auger, DA*, **Gray, AD***, Ream, TS, Kato, A., Coe, EH, Birchler, JA. (2005) Non-additive gene expression in diploid and triploid hybrids of maize. *Genetics*. **169**: 389-397

* these authors contributed equally.

Hobson, RJ, Geng, J, **Gray, AD**, Komuniecki, RW. (2003) SER-7b, a constitutively active $G\alpha_s$ coupled 5-HT7-like receptor expressed in the *Caenorhabditis elegans* M4 pharyngeal motoneuron. *J. Neurochem.* **87**: 22-29

Honors and Awards:

Awarded sabbatical for Spring 2012.

Promoted to full Professor in 2011.

Received the Lourdes College Faculty Excellence Award for 2010-2011.

Nominated for the Faculty Excellence Award at the Lourdes College for the 2007-08, 2009-2010, 2010-2011 academic years.

Received the **first annual award** for a pilgrimage sponsored by the Sisters of St. Francis offered to faculty/staff of Lourdes College, to travel to Assisi and Rome in 2010.

Received a competitive Small Grant from the Center of Teaching and Learning, Univ. of Toledo, in Fall 2004, for the purchase of audiovisual materials to be used in the classroom.

Received UMC Molecular Biology Program Travel Award to attend International Symposium on Heterosis, in August 1997, CIMMYT, Mexico City, Mexico.

Research Expertise:

I have direct experience with each of the following techniques: - maize genetics, general microbiology culturing and sterile technique procedures, DNA and RNA isolation protocols, construction of recombinant DNA molecules, Southern and Northern hybridization, gene amplification using the polymerase chain reaction (PCR), differential display analysis, embedding and sectioning of plant tissue for histochemical analysis (including TUNEL staining). In my post-doctoral research I gained experience in protein expression and related techniques like Western hybridization and *in vitro* transcription/translation.

Douglas W. Leaman, Ph.D.
Professor and Chair, Department of Biological Sciences
2801 W. Bancroft St., MS601, Toledo OH 43606
Phone: (419)-530-1555 or -2066, dleaman@utnet.utoledo.edu

PROFESSIONAL PREPARATION

Project Scientist, The Cleveland Clinic Foundation; 1997.
Research Associate, The Cleveland Clinic Foundation; 1995-97.
Postdoctoral Fellow, The Cleveland Clinic Foundation; 1993-95.
Ph.D. University of Missouri, Molecular Biology/Reproductive Physiology; 1993.
M.S. The Ohio State University, Molecular Growth and Development; 1989.
B.S. The Ohio State University; 1987.

APPOINTMENTS

Professor and Chair, Department of Biological Sciences, University of Toledo; 2010-present.
Chairman, Department of Biological Sciences, University of Toledo; 2009-present.
Associate Professor of Biological Sciences, University of Toledo (Tenured in 06/07); 2001-2010.
Project Staff, Cleveland Clinic Taussig Cancer Center; 1999-2001.
Scientific Director, Gemini Technologies Inc.; 1997-1999.

RECENT RELEVANT PUBLICATIONS (of 58)

*=graduate students or postdoctoral fellows

Rosebeck, S.R.* and D.W. Leaman. (2008). Mitochondrial localization of the Interferon-inducible protein ISG12a. *Apoptosis*. 13:562-572.

D. Goubau, R. Romieu-Mourez, M. Solis, E. Hernandez, T. Mesplède, R. Lin, D. Leaman, J. Hiscott. (2009) Transcriptional re-programming of primary macrophages reveals distinct apoptotic and anti-tumoral functions of IRF-3 and IRF-7. *Eur. J. Immunol.* Feb;39(2):527-40.

Rosebeck, S.R.*, K. Sudini*, T. Chen*, and D.W. Leaman. (2011) Involvement of Noxa in mediating cellular ER stress responses to lytic virus infection. *Virology*. 417:293-303.

Pierce, L.R.*, E.L. Crawford, J.C. Willey, D.W. Leaman, V.V. Palsule, M. Faisal, R.K. Kim, B.S. Shepherd, and C.A. Stepien. A new StaRT-PCR approach to detect and quantify fish Viral Hemorrhagic Septicemia virus (VHSV): Enhanced quality control with internal standards. *J. of Virological Research*. 189:129-142.

Stepien, C.A., Pierce, L.R.* and D.W. Leaman. (2013) Gene diversification in an emerging quasispecies: A decade of mutation in fish viral hemorrhagic septicemia (VHS) across the Laurentian Great Lakes. *J. Evolutionary Biology*. *In Review*.

5 OTHER RELEVANT PUBLICATIONS

Leaman, D.W., A. Salvekar*, R. Patel, G. Sen and G.R. Stark. (1998). Isolation of a mutant human cell line defective in interferon-stimulated gene silencing and in responsiveness to double-stranded RNA. *Proc. Natl. Acad. Sci.* 95:9442-9447.

Leaman, D.W., M. Chawla-Sarkar, K. Vyas*, M. Rehemani*, S. Toji, K Tamai and E.C. Borden. (2002). Identification of X-linked Inhibitor of Apoptosis-Associated Factor-1 (XAF1) as an Interferon-stimulated gene that augments TRAIL/Apo2L-induced apoptosis. *J. Biol. Chem.* 277:28504-28511.

Sun, Y.* and D.W. Leaman. (2004) Ectopic expression of Toll-like receptor 3 (TLR3) overcomes the double-stranded RNA (dsRNA) signaling defects of P2.1 cells. *J. IFN Cytokine Res.* 24:350-361.

Sun, Y.* and D.W. Leaman. (2005) Involvement of Noxa in cellular apoptotic responses to interferon, double-stranded RNA and virus infection. *J. Biol. Chem.* 280:15561-15568.

K. Vyas*, S. Chaudhuri, D.W. Leaman, A.A. Komar, A. Musiyenko, S. Barik and B. Mazumder. (2009) Genome-wide polysome profiling reveals an inflammation-responsive post-transcriptional operon in IFN- γ -activated monocytes. *Mol. Cell. Biol.* Jan;29(2):458-70.

SYNERGISTIC ACTIVITIES

- **Service on NIH Grant Study Sections:**
NIH/NIAID, ZAI1-BDP-I-J3 and ZAI1-BDP-I-J4, January 2009; NIH/NCI RAID Review panel, November 2005; NIAID ZAI VSG-1 (S2) Special Emphasis Panel, June 30, 2004; NCCR/NIH Comparative Medicine Review Committee, Study Section, Ad Hoc, Feb. 2003; NCCR/NIH Comparative Medicine Review Committee, Study Section, Ad Hoc, Jun. 2002
- **Other Ad Hoc Grant Peer Reviews:**
National Science Foundation (2006, 2007); Philip Morris Research Grants Program (2003-2005); Research Grants Council of Hong Kong (March 2005); Medical University of Ohio Stranahan pilot grants (2005); U.S. Civilian Research and Development Foundation (2007, 2010)
- **Manuscript Peer Reviewer (Since 2001):**
J. Biol. Chem. (multiple manuscripts); BMC Genomics, BMC Cancer, BMC Immunol; Proc. Natl. Acad. Sci. (mult. manu.); J. Neurosci.; J. Interferon and Cytokine Res. (mult.); Cytokine; Intl. J. Nanotechnol.; IUBMB Life; Oligonucleotides; Oncogene; Br. J. Cancer
- **Consulting Activities:**
Consultant for Gemini Technologies/Ridgeway Biosciences – 1997-2000, 2002-04
- **Meeting Organization Committees:**
Program Committee, 2008 OCCBIO regional bioinformatics meeting, University of Toledo (June 2008); Program Committee, 2009 OCCBIO regional bioinformatics meeting, Case Western Reserve University (June 2009)
- **Strategic Planning:**
Developed departmental vision and mission statements for research and teaching;
Assisted in establishment of the new College of Natural Sciences and Mathematics;
Developed new degree program and curricular offerings;
- **Undergraduate Program Issues:**
Created new recruitment literature/brochures;
Developed new Medical Technology baccalaureate degree program in department
Conduct most of the hands-on recruiting in the department
Established and continue to sponsor the annual Biology Undergraduate Research Symposium
- **Assessment:**
Oversee the departmental assessment process, including the committee responsible for the annual evaluation of our assessment tools;

CURRENT GRADUATE STUDENTS AND POSTDOCTORAL ADVISEES

Qi Ke, Ph.D. advisee (2010-pres.); Boren Lin, Ph.D., Postdoctoral Fellow (2007-pres.); Samantha Stefl, MS advisee (2013-present).

COMPLETED GRADUATE STUDENTS AND POSTDOCTORAL ADVISEES

Monila Rehemam, M.S. Advisee (2001-03; Now a Dentist); Mark Fox, M.S. advisee (2001- 04; Now a Patent/Technology Transfer Attorney); Shaun Rosebeck, Ph.D. advisee (2001-06; Now a postdoc at the University of Michigan); Haiying Li, Ph.D. advisee (2002-07; Now a postdoc at UTSW Medical Center); Da Xu, Ph.D. advisee (2003-08; Now in PA school at Wake Forest); Tiannan Chen, M.S. advisee (2006-08; Now a Research Technician); Suchitra Subramani, M.S. advisee (2007-2010; Now a Research Technician); Adam Pore, MS advisee (2008-2012); Kuladeep Sudini, Ph.D. advisee (2008-2012; Postdoc at Johns Hopkins).

UNDERGRADUATE RESEARCH STUDENTS

Selva Musa (02); David Korostyshevsky, Jennifer Carroll and Marco De Santis (03); Joe Sanders and Jennifer Barton (04); Mike Pinto (04-05); John Fenner (05); Leah Palladino and Stephanie Coomes (06/07); Robert Rominski (09-11); Dan Hettel (10-13); Tyler Williams (11-13); Tyler Popil (2013).

Lourdes University

COURSE SYLLABUS

**BIO 299: Internship Preparation Course
2014**

Department:	Biology and Health Sciences
Credit Hours:	1
Prerequisites:	Students must have at least sophomore standing and maintain a 2.5 GPA with a minimum 12 credit hours per year to remain enrolled in the internship program.
General Education:	N/A
Core curriculum:	N/A
Program Learning Outcomes:	#1-4
University Learning Outcomes:	IC, IIA,B, C, F, VB
Instructor:	
Office:	
Phone:	
Email:	
Office hours:	

I. Course Description:

This one-credit course prepares students for the internship and co-op experiences by providing students with the necessary skills to effectively represent themselves in the world of work. Topics include: creating resumes and Linked In profiles, interviewing skills, social protocol, career options, and workplace conflict resolution. The course also helps students create concrete plans for having a positive internship experience by writing learning objectives for the internship as part of the self-evaluation process.

II. Purpose of the Course:

This course provides students with the requisite knowledge to survive and even thrive in competitive internship and job situations. Employers are desirous of the skills acquired in a liberal arts college, so this course cultivates the communication savvy students need to show how valuable their skills and education are. Internship prep teaches students to present themselves with confidence, persuasively speaking about all that they will bring to the workplace. This class provides hands-on training and skill building through job shadowing, web-based interviews, and journaling to prepare Lourdes students for the internship as a potential transformative experience leading to future career success.

III. University Learning Outcomes and Objectives:

Upon completion of the course, students will demonstrate:

IC. Use knowledge & methods of inquiry & analysis appropriate to the physical or natural sciences, the social sciences, and mathematics to develop well reasoned solutions to local and global issues.

- IIA. Systematically explore issues and ideas by finding, retrieving, evaluating, and using information responsibly.
- IIB. Comprehensively and objectively analyze and evaluate appropriate data (e.g., issues, texts, artifacts, and events) in order to develop an informed conclusion.
- IIC. Review existing knowledge and synthesize it in original ways to clarify meaning, develop a broader perspective, or present a new point of view.
- VB. Apply theory to practice in responding to issues or situations and addressing contemporary problems in academic and/or other real-world settings.

IV. Program Learning Outcomes:

PLO # 1: Demonstrate knowledge of the discipline of biology.

1.1 Demonstrate knowledge and understanding of biological terms, principles, and concepts, utilizing appropriate depth and breadth in select content areas of biology.

PLO # 2: Demonstrate skills of a biologist.

2.1 Design, conduct, and evaluate protocols, studies, and experiments utilizing the scientific method.

2.2 Demonstrate proficiency in the use of biological instruments and technologies.

PLO #3: Apply effective critical thinking in biology.

3.1 Interpret, analyze, and evaluate biological information.

3.2 Apply biological concepts to social issues.

PLO #4: Demonstrate effective communication in biology.

4.1 Demonstrate effective written, speaking, and listening skills in biology reports, essays, projects, posters and presentations.

V. Course Objectives:

The student will:

1. Craft a responsible online career presence through various social media.
2. Create or revise an appropriate resume for the internship and beyond.
3. Write personally challenging internship objectives with which to evaluate the internship experience.
4. Job shadow a small business (in biohealth) for 1-2 days and reflect on it.
5. Conduct a video interview with a professional in the field to be archived online.
6. Discuss the meaning of and practice applying the University and the Program Learning Outcomes in the internship setting.
7. Journal weekly on the career topics as presented in class.

VI. Policies:

1. Policy on Emergency Response

In case of a tornado, we will proceed to the nearest shelter. For this course, the shelter is located _____. In case of a fire, we will proceed in a calm and efficient manner to the nearest exit. For this course, the nearest exit is _____. Do not use the elevator. Do not block building entrances once you are out.

2. Statement on Disabilities:

If you have a documented disability and need to arrange academic adjustments, please contact the Office of Accessibility Services at oas@lourdes.edu or 419-824-3523.

If you have a documented disability and have already been assigned academic adjustments by the Office of Accessibility Services, please discuss them with me so that we can implement them appropriately.

If you will require assistance in the event of an emergency, please discuss with me your needs on the first day of class so that we can plan accordingly. The Emergency Evacuation Procedure for Persons with Disabilities is available at:

<http://www.lourdes.edu/Home/CampusLife/AccessibilityServices/EvacuationProcedures.aspx>

3. Statement on Academic Honesty:

(Refer to the "Academic Dishonesty" section in the Student Handbook.)

Cheating will not be tolerated. Cheating includes, but is not limited to copying from another person's work or exam, with or without their knowledge or giving assistance to another person during an exam. It also includes using another person's paper or ideas as your own, without giving credit to that person. Any person caught cheating will receive a zero for the material involved. Students are encouraged to work together in study groups, but the answers to quizzes and tests must reflect the individual student's work and thought. Students submitting others work as if it were their own will be either given an F on that assignment or an F for the entire course, at the instructor's discretion. Regardless, University procedures will be following with notification to all pertinent authorities for all plagiarized work.

4. Statement on Academic Grievance:

A final course grade is only subject to review when 1) a procedural error has been discovered in the calculation or recording of a grade, or 2) there is a basis or need for an academic reevaluation. Students are always encouraged to attempt to resolve issues directly with the member of the faculty, staff, or administration involved in an informal manner. If a student wishes to have a final grade reconsidered, the student must meet with the instructor and attempt to resolve the difference. If the issue is not resolved, a *Final Grade Grievance Form* may be obtained from the University web site. The student must use the form to describe the problem in writing and the reason(s) the grade should be changed. The student will then obtain a signature from the instructor to show that they have met to discuss the issues in the grievance. At this point, the student must return with the form to the Executive Assistant to the Provost (SCH 141) to have it dated and recorded. This date marks the official beginning of the grievance.

The *Final Grade Grievance Form* must be presented and signed at each of the subsequent selected appeal steps. The grievance procedure must begin within 15 business days of the beginning of the spring semester for grades received during the fall semester, and within 15 business day of the beginning of the fall semester for grades received during the spring or summer session. **Please refer to the Lourdes University Catalog for other important deadlines and details of the policy.**

5. Attendance Policy:

Attendance is essential for success in this class. Students are expected to be present at & on time for all classes. Students are responsible for making up any work missed; make up time is arranged with the instructor. All work is to be made up within the week of the day(s) missed.

6. Recording Policy

“Lourdes University prohibits the use of tape-recorders, video cameras, cell phones, and all other devices by students to record class lectures or meetings with the instructor or any staff member unless they have express written consent of the professor or staff member. Before recording any lecture, a student who wishes to record a lecture must sign a Lourdes University Agreement Form and present this to the instructor for written consent. Once students have signed the Lourdes University Agreement Form and have the express written consent of the instructor to record a class or meeting students must make their own arrangements to record the class.

Lourdes University prohibits the use of electronic devices by students for the purpose of recording private conversations with faculty or staff members unless all parties have given written consent. Students with disabilities who are unable to take or read notes may be able to record class lectures for their academic study only if approved by the Office of Accessibility Services. Information contained in recorded lectures is protected under federal copyright laws and may not be published or quoted without the express consent of the instructor and Lourdes University.

These recordings may only be used for the student’s academic use related to the course, and cannot be shared, copied, released, or disseminated to others without the express written consent of the instructor. Recorded lectures may not be used in any way against the instructor, other faculty members, staff, Lourdes University, or students whose classroom comments are recorded. Students should be aware that any class and discussions held therein may be subject to recording. Violations of this policy may result in sanctions.”

7. Evaluation:

- A total of five (5) in-class journals will be due on the scheduled dates. A total of five (5), 10 minute pop quizzes will be administered (each quiz worth 20 points), at the beginning of a class. Each quiz will consist of multiple-choice, fill in the blanks, short answer questions, true/false, diagrams, labeling & problem-solving questions. Quizzes will be given at the *beginning* of the class. A missed exam, or quiz will count as zero (0) points.
- NO make-up quizzes or journals will be given. If you miss a quiz or omit a journal entry, it will be counted as your lowest score and dropped automatically from your final score.
- **Internship Entrance Paper** (50 points)
Data: (a) Your name,
(b) Your placement,
(c) Your field supervisor,
(d) Your specific duties.

Please say something about your **Goals, Expectations, and Concerns** regarding your internship placement. What interesting possibilities do you see that you might open up which are not part of the explicitly stated duties? How does it connect with your interests and passions? What issues concern you? What do you hope to learn?

- **Resume, Job shadowing experience, Filmed interview, Internship objectives** – these

assignments will be submitted through Sakai, and you will have continued access to the site during your internship experience.

- **Weekly Log**

Students are required to complete a minimum of 120 internship hours. As part of this course, students will learn how to keep logs of their time and activities that will be turned in to the faculty mentor at the end of the semester. These logs will be used to document and verify the student's contact hours. The student's on-site supervisor must initial the log sheets.

Grading Scale:

Letter grades will be based on the percentage of total possible points you have earned. There are 330 points you can earn. The conversion system is as follows:

A 94-100%	C 73-76%
A- 90-93%	C- 70-72%
B+ 87-89%	D+ 67-69%
B 83-86%	D 63-66%
B- 80-82%	D- 60-62%
C+ 77-79%	F 59% or lower

8. Key Resources:

1. **Science Resource Room (SRR):** To give students a place to study and review, we have established a **Science Resource Room** in MAH 115, immediately next door to the laboratory room. A schedule of open hours will be posted on the door. Depending on your internship, SRR may be very helpful to you in reviewing biohealth materials.

2. **Academic Support Center:** Free tutoring is available to you. Consider taking advantage of this resource.

9. Other policies/procedures:

Lourdes University e-mail policy: Students are encouraged to use their Lourdes University email accounts for email communication with the University faculty and staff. Should a student use another email account (e.g., a Yahoo mail account) to submit an assignment, the student does so at her or his own risk. Should the document fail to arrive for whatever reason, the student is accountable for a missing assignment, subject to the terms of the individual instructor's syllabus.

10. Tips for success:

1. Identify your particular learning style and follow strategies for success.
2. Carry out the necessary work to achieve the grade you want. This requires preparation throughout the term.
3. Attend all classes.
4. Read lecture and lab assignments before coming to class.
5. Do not procrastinate! Do not do all your work the night before it is due!

6. If you are experiencing difficulty with the course, seek assistance *early in the semester*. Do not wait until the end of the term when it is too late to salvage your grade.

11. General Class Rules

1. Please turn off your cell phones
2. Privacy mandates prevent me from discussing student affairs with any other person besides the student himself/herself. I can only discuss any aspect of this course with you, the student. Therefore, if a parent contacts me by telephone, e-mail, or in person, on your behalf, I still cannot convey information relative to you or this course.

Course Topics:

Resume Construction
Linked In Profiles
Online conduct and presence – self research and analysis
Other social media for networking
Professional Etiquette
Conflict Resolution
Biohealth job shadowing at the small business
Interview with a professional in your field
Internship Entrance baseline writing
Personal Internship objectives
Setting up the Internship job log
Planning ahead to the Research Symposium
Researching your target company
Getting familiar with the online evaluation tools



**Department of Biology
Internship**

Check off the following internship prerequisites:

1. _____ Will you have Senior standing at the time of your internship?
2. _____ Will you have taken at least 30 credits of biology courses at the time of your internship?
3. _____ Do you have a GPA of at least 2.75?

Date: _____

Name: _____

Home Address _____

Street

City

State

Zip

Current Address: _____
(if different) Street

City

State

Zip

Email address: _____

Phone _____

Major: **Biology** Minor: _____ Anticipated graduation date _____

Advisor _____

Underline term for which you intend to enroll. Fall Spring Summer

The Internship Coordinator will contact you after you have completed your application to discuss the internship and the date eligible students will be contacted.

Relevant Coursework

List all the biology/chemistry courses you have completed or are in progress and any other courses that might be relevant.

Course Name and Number	Semester Taken (List IP if course is in progress)	Grade
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

Statement of Internship Objectives

- Describe what you expect to accomplish by completing an internship in biology. Consider objectives that are unique to you as well as those that may be applicable to the majority of students.

BIO 299: Internship Preparation

Entrance Paper

1. Data:
 - (a) Your name,
 - (b) Your placement,
 - (c) Your field supervisor,
 - (d) Your specific duties.

2. Please say something about your **Goals, Expectations,** and **Concerns** regarding your internship placement. What interesting possibilities do you see that you might open up which are not part of the explicitly stated duties? How does it connect with your interests and passions? What issues concern you? What do you hope to learn?.

**Bio 499: Internship
Time Log Undergraduate Internship**

Semester: _____

Name: _____

Placement: _____

Agency Supervisor (print): _____

Date	Hrs Worked	Location in Facility	Supervisor's Initials

Supervisor's Comments:

Supervisor's Signature _____ **Date** _____

Lourdes University
College of Arts and Sciences

Program Assessment Plan

Date

<p style="text-align: center;"><u>Learning Outcomes</u></p>	<p style="text-align: center;"><u>Assessment Strategies</u> <i>List all strategies used to assess each outcome. Consider using varied strategies and assessing outcomes at different times/levels in the program curriculum. Possible strategies include: test questions, case studies, presentations, problem-solving activities, synthesis papers, productions, performances, interviews, portfolios, capstone projects.</i></p>	<p style="text-align: center;"><u>Assessment Work Plan</u> <i>For each assessment strategy, indicate when the assessment will occur, how often it will occur, and how extent of learning will be measured.</i></p>	<p style="text-align: center;"><u>Assessment Reporting Plan</u> <i>For each assessment strategy, indicate how the department will analyze, discuss, and use the information collected. Keep in mind that departments will be using Report Form B to report at the end of each semester on assessment findings and plans for improvement.</i></p>

Lourdes University
College of Arts and Sciences

**Report Form B: Report on Evaluation of Objectives
for Students Services, Campus Ministry, Institutional Advancement,
and Administrative Services and Financial Affairs Departments**

Purpose: Report Form B is a tool for collecting evaluation information at the institutional level, documenting department-level evaluation activities, and promoting continuous improvement in all departments.

Please submit annually to the Director of Institutional Assessment & Retention no later than August 1.

- 1. Write 1 -2 sentences explaining how and how well the department accomplished departmental objectives during the past year. Include specific examples and data to support your evaluation.**

- 2. Write 1 -2 sentences explaining your department's plans to improve objective achievement next year.**

- 3. If your department or programs in your department have learning outcomes, list:**
 - a. Strategies used this semester to assess student learning in the program:**

 - b. Findings based on the assessment strategies used this semester:**

 - c. Plans for improvement, including a timeframe for implementing change(s):**

 - d. Changes made as a result of assessment conducted last semester and an assessment of their effectiveness:**

LOURDES UNIVERSITY
College of Arts and Sciences

COURSE REPORT DIRECTIONS

Directions

In the first column in the table, list the College Learning Outcome(s) by number (e.g., 1a, 2b, 9a), Program Learning Outcomes, and Course Objectives for the course. A list of College Learning Outcomes is attached for your convenience. If your department does not have Program Learning Outcomes, please put N/A under Program Learning Outcomes. Otherwise, write out the Program Learning Outcomes for the course. Then write out the Course Objectives for the course.

Please reflect on student learning in the course, and put an X under the approximate proportion of students in your class who achieved each outcome and objective. In the last column, identify the assessment strategy or strategies used to assess student learning related to the outcome or objective (possible strategies include: test questions, paper assignments, class discussions, presentations, problem solving, case studies, etc.).

Lastly, please respond to the questions about improvement on the last page of the course report form, sign the form, and give it to your department chair by the end of the semester.

LOURDES UNIVERSITY
College of Arts and Sciences

COURSE REPORT

Name:

Course Number & Section:

Term:

Course Title:

Class Format (circle): **Regular** **Accelerated** **Weekend/Alternating Weeks** **Online** **Hybrid**

College Learning Outcomes	0 – 59%	60-69%	70-79%	80-89%	90 –100%	Assessment Strategies
Program Learning Outcomes	0 – 59%	60-69%	70-79%	80-89%	90-100%	Assessment Strategies
N/A Fall 2005						
Course Objectives	0 – 59%	60-69%	70-79%	80-89%	90-100%	Assessment Strategies

In short narrative form, please explain specifically what (in your opinion) could be done IN THE FUTURE to improve student achievement of

(1) The College Learning Outcomes for the course?

(2) The Program Learning Outcomes for the course? (Some departments may or may not have these.)

N/A Fall 2005

(3) The Course Objectives for the course?

Instructor's Signature:

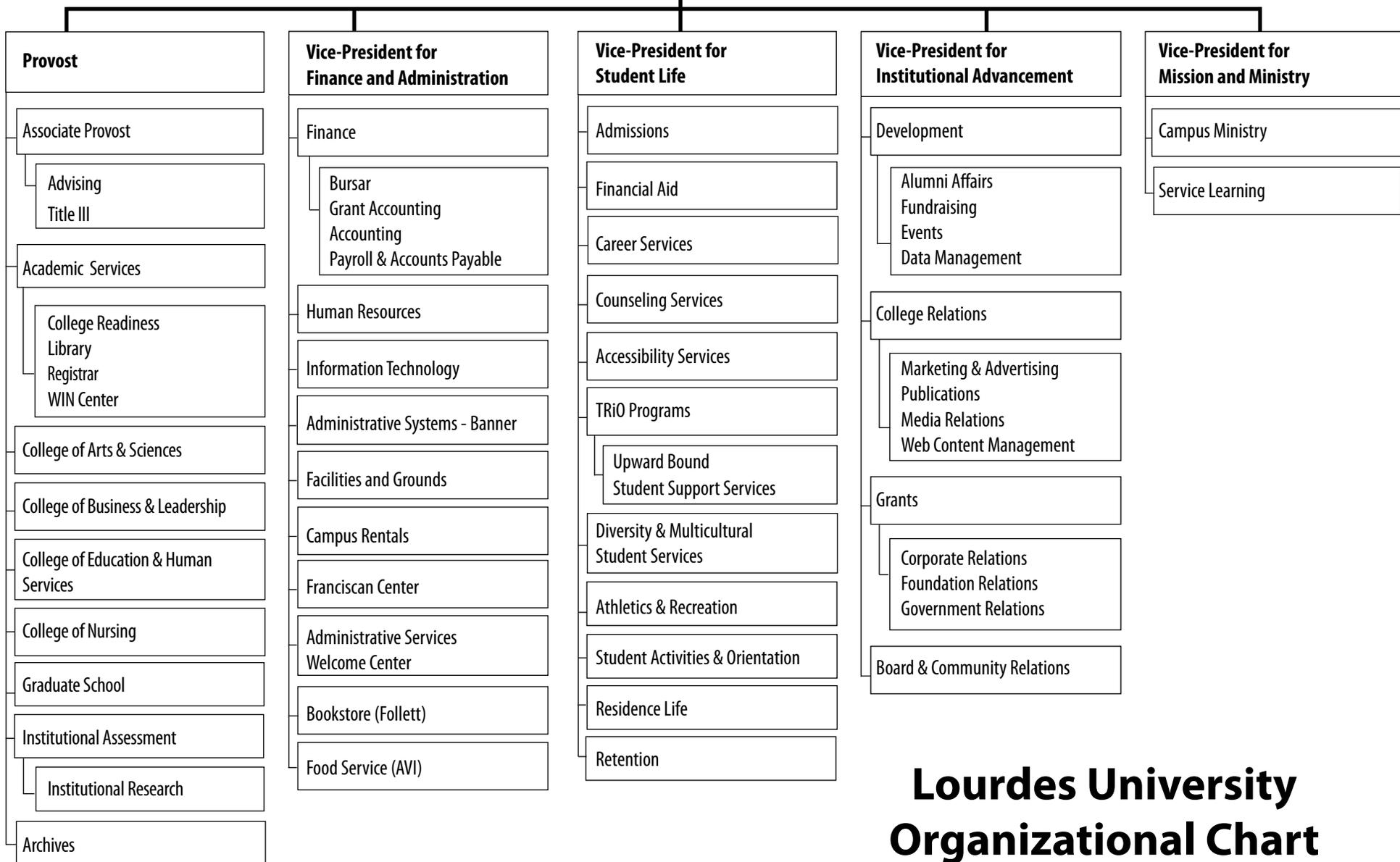
Date:

Department Chair's Signature:

Date:

Board of Trustees

President



**Lourdes University
Organizational Chart**

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LOURDES

Learning Goals & Outcomes

The Mission Statement, Guiding Principles, and our Franciscan Values express the College's purpose and identity. To ensure the realization of this vision, the College has articulated observable and measurable learning outcomes. To be understood correctly and appreciated fully, the learning goals and outcomes must be interpreted in light of the complete texts of the Mission, Guiding Principles and Franciscan Values.

Lourdes believes that a college education includes sufficient breadth in the liberal arts and sufficient depth in an area of specialization to prepare graduates who will be recognized as educated persons and prepared for meaningful work and/or graduate study. The learning outcomes describe the knowledge, skills, and attitudes students develop in increasingly more complex ways as they progress through their curriculum to graduation and lifelong learning.

I. Knowledge of Human Cultures and the Physical and Natural World

Students will engage the big questions, both contemporary and enduring, and gain an understanding of the diversity of human experience and the physical and natural world in order to become well-educated citizens in a global society.

They can:

A. Use knowledge and methods of history, literature, philosophy, and theology to address enduring questions of meaning and develop a worthy vision of the human person.

B. Use knowledge, theories, or methods appropriate to the arts to understand their context and significance.

C. Use knowledge and the methods of inquiry and analysis appropriate to the physical or natural sciences, the social sciences, and mathematics to develop well reasoned solutions to local and global issues.

II. Intellectual and Practical Skills

Students will frame meaningful questions and to answer them will gather pertinent information using appropriate technological tools. They will analyze, synthesize and reflect on that information and effectively apply and communicate the results.

They can:

A. Systematically explore issues and ideas by finding, retrieving, evaluating, and using information responsibly.

B. Comprehensively and objectively analyze and evaluate appropriate data (e.g., issues, texts, artifacts, and events) in

order to develop an informed conclusion.

C. Review existing knowledge and synthesize it in original ways to clarify meaning, develop a broader perspective, or present a new point of view.

D. Use mathematical or formal reasoning to answer questions or to achieve desired goals.

E. Collaborate in a search for well-reasoned solutions.

F. Express ideas effectively in speech and in writing to inform, engage, and persuade their audiences.

III. Catholic and Franciscan Religious and Intellectual Traditions

Students will gain an awareness of the Catholic and Franciscan religious and intellectual traditions.

Students will:

A. Engage topics involving the Catholic and Franciscan traditions across the curriculum and in co-curricular activities.

B. Experience and grow to embrace the welcoming Franciscan values of community, reverence, learning, and service.

C. Be aware of how the Catholic and Franciscan traditions and values have shaped their Lourdes College experience.

IV. Personal and Social Responsibility

Students will make use of ethical principles, reasoning, and civic knowledge, to exercise social and individual responsibility in the interaction with diverse cultures and engagement with global issues.

They can:

A. Demonstrate knowledge of personal and interpersonal responsibilities, ethical principles consonant with Christian tradition, and moral reasoning.

B. Demonstrate knowledge of the richness of human diversity.

C. Demonstrate a commitment to service as well as civic and social action in diverse communities.

D. Demonstrate a commitment to addressing local and global ethical issues.

V. Integrative Learning

Students will integrate learning across general and specialized areas of study in order to respond effectively to issues or situations and to address contemporary problems.

They can:

A. Connect skills and knowledge from multiple sources and experiences in responding to issues or situations and addressing contemporary problems.

B. Apply theory to practice in responding to issues or situations and addressing contemporary problems in academic and/or other real-world settings.

C. Incorporate diverse and even contradictory points of view in responding to issues or situations and addressing contemporary problems.

D. Recognize contextual factors, such as cultural, historical, professional, and ethical frameworks, in responding to issues or situations and addressing contemporary problems.

OMIC SUSTAINABILITY BUDGET
Lourdes University/University of Toledo Partnership

Expense

	2016-17	2017-18	2018-19
Infrastructure			
Personnel - Shared Internship Coordinator (calculated at \$35,000 salary plus LU 37% fringe rate, one position at each institution beginning 2017-18)	100,695	158,595	222,032
Current staff and faculty time (calculated at \$50/hr * 5 hours/week * 52 weeks)	13,000	13,000	13,000
Payroll processing expense	120	240	240
Office Space (\$15/hr * 10 hrs/wk per person)	31,200	46,800	62,400
Course expenses	5,000	7,500	10,000
Supervision/Admin Support	10,000	15,000	20,000
Total Infrastructure	160,015	241,135	327,672
Total Direct Costs	160,015	241,135	327,672
Indirect (38% LU Federal Rate) 38% of direct expenses	60,806	91,631	124,516
TOTAL	220,821	332,766	452,188
Revenue			
Internship/Job Fair revenue	10,000	15,000	20,000
Private Funds (Contributions, Grants)	50,000	75,000	100,000
Employers Sponsorship Opportunities	5,000	7,500	10,000
State Share of Instruction (SSI – University of Toledo)	66,246	66,553	90,438
Tuition-improved retention	79,574	153,713	211,750
Additional student internship fees	10,000	15,000	20,000
TOTAL	220,821	332,766	452,188
Lourdes	55,205	113,140	226,094
UT	165,616	219,625	226,094

Save the Date!

Collegiate Employ-Net Job Fair

April 4, 2014

10 am to 2 pm

Lourdes University

Questions?

Contact Lynn Hoehn at lynn_hoehn@owens.edu

www.cenconnects.net

Lourdes University



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Implementation Schedule

Please provide a brief bulleted list of major components of grant activity taking place each term.

Term	Grant Activities
Spring 2014	<ul style="list-style-type: none"> Hire Internship Coordinator Make arrangements for Summer 2014 interships Recruit internship students
Summer 2014	<ul style="list-style-type: none"> First interships take place Employer contacts for additional interships continue Final preparations for internship preparation courses
Fall 2014	<ul style="list-style-type: none"> Internships take place Students participate in internship preparation courses Employer contacts for additional interships continue Prepare and submit Summer Semester Metrics and Quarterly Fiscal Report
Spring 2015	<ul style="list-style-type: none"> Internships take place Students participate in internship preparation courses Employer contacts for additional interships continue Prepare and submit Fall Semester Metrics and Quarterly Fiscal Reports Resources are sought to support project post-grant
Summer 2015	<ul style="list-style-type: none"> Internships take place Students participate in internship preparation courses Employer contacts for additional interships continue Prepare and submit Spring Semester Metrics and Quarterly Fiscal Report Resources are sought and secured to support project post-grant
Fall 2015	<ul style="list-style-type: none"> Internships take place Students participate in internship preparation courses Employer contacts for additional interships continue Prepare and submit Summer Semester Metrics and Quarterly Fiscal Report Resources are sought and secured to support project post-grant
Spring 2016	<ul style="list-style-type: none"> Internships take place Students participate in internship preparation courses Employer contacts for additional interships continue Prepare and submit Fall Semester Metrics and Quarterly Fiscal Reports Plans are finalized for project continuation post-grant, resources sought and secured