

**EXCEPTIONAL MERIT GRANTS PROGRAM  
FOR FACULTY AND STAFF**

**Grant Application Cover Sheet**

**Contact Information for the Primary Person submitting the Proposal:**

**Name and Title:** Susan Wancour, RDH, MS, Assistant Professor  
Denise Byrnes, RDH, BS, Clinical Dental Hygiene Instructor

**Department:** Dental Hygiene and Medical Imaging

**Address:** 312 VFS Bldg., 200 Ferris Drive

**City/State/ZIP:** Big Rapids, MI 49307

**Phone Number:** 231-591-2398    **Email:** wancours@ferris.edu

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**Project Name:** Intraoral Digital Dental Camera

**Purpose of the Grant (one sentence):** To obtain state-of-the-art intraoral camera (IOC) equipment to teach the dental hygiene students digital IOC techniques to keep up with the latest technology being utilized in most dental practices in Michigan and nationally, which will then enable the student to be a more viable applicant in today's competitive job market.

**Amount Requested:** \$ 7,500.00

**Total Project Cost:** \$ 7,500.00

**Dates of the Project:** August 2014

**Project Completion Date:** April 2015

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**Dean and Department Head Support**

The project proposal in the attached document is consistent with the needs and direction of the department and college.

\_\_\_\_\_  
Signature, Dean

\_\_\_\_\_  
Signature, Department Head

\_\_\_\_\_  
Printed Name

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Printed Name

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\_\_\_\_\_  
Signature, Primary Applicant

\_\_\_\_\_  
Printed Name

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**Narrative**

*When completing the narrative portion, please contain discussion to the allowable space on the page.*

**A statement of how the project demonstrates exceptional merit in advancing the mission of Ferris State University (maximum 1 page). Include how the project compliments and enhances other efforts on campus and how the project will continue in the future.**

When reviewing Ferris State University's mission statement, "Ferris State University will be a national leader in providing opportunities for innovative teaching and learning in career-oriented, technological, and professional education," it reminds us of the reason Woodbridge Ferris began this great institution – to provide students with hands-on skills that will prepare them for securing a successful occupation. This proposed project will entail just that – to teach an innovative skill to our dental hygiene students. It is difficult for dental hygiene graduates to find employment due to the current financial crisis; the extra knowledge and skill of operating an intraoral camera (IOC) will serve as a lucrative addition to students' resumes which will then enable the student to be a more viable applicant in today's competitive job market.

This project demonstrates exceptional merit in advancing the mission of Ferris State University and the dental hygiene profession by providing innovative learning opportunities through advanced IOC technology. The dental hygiene profession is committed to delivering the highest quality of care to each of its patients and applying advancements in technology and science to continually improve the oral health status of the population. In different areas of medicine endoscopes have been used for many years. This re-imaging concept was introduced to dentistry in the late 1980s and the quality of miniature IOCs has improved greatly over time. In its simplest form, image management is like an electronic photo album. It allows you to capture, store, retrieve and display an image, you can also transmit or enhance an image.

Surveys have shown that approximately 70% of all dental offices in the U.S. use IOCs, and these numbers are growing indicating the acceptance and increased use of this technology in the dental field. Among IOC advantages are: immediate observation of oral conditions, ease of data storage, the ability to send predeterminations to third party payers (insurance companies) promptly, ability to send data quickly to specialists, and digital photography is more aseptic. An IOC wand is smooth and slender so it is unobtrusive in the oral cavity, therefore exhibiting greater patient acceptance.

In addition to these advantages, one of the most important functions of an IOC is the ability to educate patients on their oral condition. While most patients have difficulty understanding "dental-lingo" and viewing x-rays, use of an IOC allows the clinician to translate the language of clinical diagnostics to an understandable, visually enhanced experience for the patient. IOC technology brings to dentistry a vehicle for optimizing patient oral health that will lend to support their long-term overall health.

This project will enhance the dental hygiene clinic's software already in place, i.e. patient records, digital radiography, digital patient charting, etc., which is compatible with the IOC technology we are proposing to obtain with grant funding. This will enable the clinic to have patient digital photographs connected to clinic software so they can be stored digitally, which not only saves on resources, but also allows us to be more compliant with the stringent Health Information Portability and Accountability Act (HIPAA) to protect patient records. The proposed intraoral camera is also Food and Drug Administration (FDA) registered and is in its 15<sup>th</sup> year of manufacturing, so its quality has been established. The proposed technology will also serve to complement previous grants, enhance the skills all of the 80+ first and second year dental hygiene students, and fulfill our mission of becoming a national leader in innovative teaching and learning for many years to come.

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**A brief description of the project being proposed and the desired outcomes (maximum 1 page).**

Presently, there are no IOCs in the Ferris State University Dental Hygiene Clinic. We propose that at least two cameras be available for student use on mannequins and on actual patients that are being treated in the Dental Hygiene Clinic. The computer hardware and software is already available in the clinic area.

The short-term desired outcome would be for each student to learn to use the new IOC equipment. The longer-term desired outcome would be to have at least one IOC in each clinic section (4-5 total units), so more students can utilize this equipment at one time.

We will propose to the Dental Hygiene and Medical Imaging Department head to use vocational education and/or clinic revenue monies in the future to obtain additional cameras. Once the initial financial investment for the digital intraoral cameras is made (included in this proposal), extra units should be more feasible to obtain.

This new technology will also enable an IOC continuing education course to be added to the present courses offered to the dental community by the Ferris State University Dental Hygiene Program, which entails additional Program revenue.

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**Timeline for project implementation.**

We propose that a new dental IOC system be available when the Fall 2014 semester begins to allow time for a faculty in-service with the manufacturer, add the system to the current software, and to implement the system into the Dental Hygiene Clinic curriculum. This will enable the new technology to be used for instruction Spring 2015 semester, if not sooner. This will be when full and part-time faculty and staff will learn of and be introduced to this new clinic technology.

We plan to inform the College of Health Professions of the project in the first Fall 2014 College meeting. We also plan on utilizing the University Wide Notices to share this new venture with the entire University. The Fall 2014 FSU Dental Hygiene Advisory Board meeting will be a great time to share this information to the dental professionals from the community that serve on the Board.

Reporting to the Foundation Board of Directors will be done promptly in accordance with the Foundation's requirements: Merit Grant Progress Report due 12/05/14 with the final report due 4/30/15.

**The names and qualifications of all individuals who are substantially responsible for pursuing the proposal's objectives.**

Susan D. Wancour, RDH, MS  
Assistant Professor, Dental Hygiene Program  
Teaches in DHYG 222 Dental Hygiene Clinic 3 and DHYG 233 Dental Hygiene Clinic 4, DHYG 212 Clinical Theory 3 and DHYG 232 Clinic Theory 4; and DHYG 229/231 Pain Management Lecture & Lab. Registered dental hygienist in Michigan and Florida; certified in local anesthesia and nitrous oxide sedation.

Denise Byrnes, RDH, BS  
Clinical Dental Hygienist, Dental Hygiene Program  
Teaches in DHYG 105 Dental Hygiene Pre-Clinic, DHYG 125 Dental Hygiene Clinic I, DHYG 222 Dental Hygiene Clinic 3, DHYG 233 Dental Hygiene Clinic 4; DHYG 133 Radiology Lab. Registered dental hygienist in Michigan; certified in local anesthesia and nitrous oxide sedation.

Catherine Archer, RDH, MS  
Assistant Professor, Dental Hygiene Program  
Teaches DHYG 107/108 Oral Science A Lecture & Lab, DHYG 117/118 Oral Science B Lecture & Lab; DHYG 125 Dental Hygiene Clinic I, DHYG 222 Dental Hygiene Clinic 3, DHYG 233 Dental Hygiene Clinic 4; DHYG 123 General and Oral Pathology, DHYG 213 Periodontics, DHYG 208 Periodontics/Pathology Review; DHYG 231 Pain Management Lab. Registered dental hygienist in Michigan; certified in local anesthesia and nitrous oxide administration.

Kimberly Beistle, PhD, CDA, RDH  
Associate Professor, Program Coordinator: Dental Hygiene Program  
Second Year Clinic Coordinator  
Teaches DHYG 122 Radiology, DHYG 127/129 Dental Materials/Lab, DHYG 222 Dental Hygiene Clinic 3 and DHYG 233 Dental Hygiene Clinic 4.  
Registered dental hygienist in Michigan and Indiana; certified in local anesthesia and nitrous oxide sedation.

### **Dissemination**

Discuss how you will disseminate the results/findings of your project to the University, community, and/or your greater academic/professional community. Dissemination plans should also be included in your project timeline on page 4. Additionally, identify your specific plans to report to the Foundation Board of Directors your project results and conclusions (per the RFP requirements).

- 1) The following entails a brief discussion of how we would share the project goals, results, and findings with the College of Health Professions (CHP), the University, the Foundation Board of Directors, the dental community, and the community in general:

The large size of the Dental Hygiene Program alone is an effective means of communication since it encompasses several full and part-time faculty and staff, many of which are dentists and dental hygienists who also work in private practice in the community.

The CHP would be informed of the project through a College meeting and the CHP Weekly Bulletin; we would utilize the University Wide Notices to communicate with the entire University.

Other means of communicating with the dental community regarding this project would include the Ferris State University Dental Hygiene Advisory Board which meets every semester. The Board's members include 3 dentists and several dental hygienists from the community, an FSU Dental Hygiene alum, and a current student. The Big Rapids Dental Study Club, which consists of several dentists from the area, would also be notified, as well as the Michigan Dental Hygienists Association, which has regular meetings and publishes a monthly newsletter. The dental community would also be informed of our new technology when they receive a brochure advertising a continuing education course in intraoral digital camera techniques.

Our specific plans to report to the Foundation Board of Directors would include information derived from collaboration with the Dental Hygiene Program Coordinator and Department Head, student evaluations, student acceptance, student self-evaluation, and student grades; patient acceptance through clinical observations by faculty, and patient evaluations which are already in place, patient safety, efficacy, dental community remarks/opinion, outcomes, budget tracking, and Program evaluation.

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**Budget**

A complete project budget which details how grant funds will be used. The budget should also describe the extent to which any additional resources beyond the Foundation’s grant are needed and have been committed to the project. If requesting equipment, assess distribution/disposal upon completion of project. Please list items under the expense categories; add rows as needed. Food and beverage expenses will not be funded by the Foundation.

**Project Income:**

Ferris Foundation..... \$ 7,500.00

Department /College..... \$ 0

Digi-doc Iris Camera bwilson@digi-doc Brett Wilson Director of Special markets 916-221-8389  
1-800-518-1102 www.dentalcare.com

In-Kind (please specify).....\$ 0

Other Sources (please specify)..... \$ 0

**TOTAL..... \$ 7,500.00**

<b>Project Expenses:</b>	<b>Ferris Foundation</b>	<b>Department/ College</b>	<b>Other Sources</b>	<b>In-Kind</b>	<b>SUBTOTAL PROJECT COSTS</b>
<b>Salaries / Personnel Costs</b>			In-service for faculty/staff, no charge		
<b>Supplies &amp; Materials</b>					
Aseptic barriers	Included in price of camera				
Disinfectant wipes	Included				
<b>Equipment</b>					
Digital intraoral camera – 2 @ \$3,500	7,000.00				
LED illumination ring (attachment light for <i>extra</i> -oral photographs)	500.00				
Hand piece cradle	Included				
Computer adapter cable	Included				
Charger	Included				
<b>Travel &amp; Transportation</b>					
<b>Shipping</b>					
<b>TOTAL</b>	<b>\$7,500.00</b>				

*Budget narrative on the following page.*

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**Discussion of budget:**

The initial financial investment to implement an IOC includes the camera itself, and a LED illumination ring which is used when taking patient photographs outside of the mouth, i.e. occlusal (bite) classification, pathologies on the lips or face (herpetic cold sores, suspicious moles, scars, etc.). Also included in the price of the camera is a large supply of aseptic plastic barriers to cover the camera and disinfectant wipes for sanitizing the camera (special type needs to be used).

Due to the Dental Hygiene Program's large student body (82 students presently), we are proposing the purchase of two (2) cameras at this time. The purchase price of the two cameras will include holders for the cameras, chargers, and computer adapter cables so the cameras can be easily transported among the various dental units in the clinic.

Additional IOCs can be purchased in the future to facilitate more efficient teaching opportunities in the clinic, and to enable more students to use on patients. Funds were requested from the Dental Hygiene Program Department Head, but all available money is being used to subsidize lap top computers at each dental unit at this time. Since IOCs are an integral part of the dental appointment today, we decided to write a grant to obtain this technology.

An in-service will be held by the manufacturer rep with faculty and staff for initial set-up, demonstration, practice, and questions and answers. This in-service is included in the price at no charge.