Senate Reference No. 14-21

MEMORANDUM

TO: Fort Wayne Senate
FROM: Laurie Corbin, Chair
Curriculum Review Subcommittee
DATE: 20 January 2015
SUBJ: Bachelor of Science in Dental Technology

The Curriculum Review Subcommittee met on December 5, 2014 to review the attached proposal for the Bachelor of Science in Dental Technology. The committee approved the proposal tentatively and after further discussion on e-mail voted unanimously in favor of approving the proposal. We therefore find that the proposed degree requires no Senate review.

Approving:

Laurie Corbin
Ron Duchovic
Cheryl Duncan
Gail Hickey
Craig Hill
Nancy Jackson
Myeong Hwan Kim
David Liu
Steve Sarratore
Susan Skekloff

Not Approving

NEW PROGRAM PROPOSAL

BACHELOR OF SCIENCE IN DENTAL TECHNOLOGY
INDIANA UNIVERSITY-PURDUE UNIVERSITY FORT WAYNE
September 2014

Institution: Indiana University–Purdue University Fort Wayne

College: Health and Human Services

Department: Dental Education

Degree Program Title: Bachelor of Science in Dental Technology

Suggested CIP Code:

Location of Program/Campus Code: Fort Wayne, Indiana

Projected Date of Implementation: Fall 2015

Date Proposal was approved by
Institutional Board of Trustees:

Signature of Authorizing Institutional Officer

Date

Date Received by Commission for Higher Education

Commission Action (Date)

BACHELOR OF SCIENCE IN DENTAL TECHNOLOGY PROPOSAL

Table of Contents

Program Description

Bachelor of Science in Dental Technology
To Be Offered by Indiana University-Purdue University
Fort Wayne, Indiana

1. Characteristics of the Program

a. Campus(es) Offering Program: **Indiana University-Purdue University Fort Wayne (IPFW)**
b. Scope of Delivery (Specific Sites or Statewide): **IPFW only**
c. Mode of Delivery (Classroom, Blended, or Online): **Blended**
d. Other Delivery Aspects (Co-ops, Internships, Clinicals, Practica, etc.): **Internships, Laboratories and Practica**
e. Academic Unit(s) Offering Program: **College of Health and Human Services, Department of Dental Education, Dental Technology Program**

2. Rationale for the Program

a. Institutional Rationale (Alignment with Institutional Mission and Strengths)

- Why is the institution proposing this program?

Indiana University-Purdue University Fort Wayne (IPFW) is proposing a Bachelor of Science in Dental Technology (BSDT) degree to enhance the educational foundation of dental technology graduates in northeast Indiana. The proposed baccalaureate degree builds on the strength of the current associate degree program. The associate degree program has been in existence for 40 years and is well-supported by national, state and local commercial and private dental laboratories as well as national and state dental technology associations. The process of curriculum and program review has revealed that the associate degree in dental technology at IPFW is no longer suitable to meet all of the general education and professional curriculum requirements within acceptable credit hour limits, and that offering a bachelor degree in dental technology would better serve the IPFW, dental profession, and healthcare communities. The proposed baccalaureate program builds on the foundation of the current associate degree program, and meets the new state and university general education and degree credit hour requirements.

As a result of a more broad-based education, graduates will be better prepared to assume leadership roles in commercial and private dental technology settings as the profession continues to evolve. The BSDT will emphasize critical thinking, evidence-based decision making, collaborative practice models, cooperative learning and community-based service learning opportunities. The baccalaureate degree will prepare graduates for admission into graduate degree programs, including acquiring unique dental knowledge and technical motor skills necessary for admission into dental schools. Dental technicians/technologists have become experts in the fabrication of dental

prosthestics (appliances) due to declining emphasis in this segment of the profession in dental schools.

The BS will be offered both as four-year degree for new students and as a completion degree for graduates who have completed their dental technology education at associate degree programs.

The strength of the BSDT completion degree component is its ability to articulate with dental technology programs throughout the United States for transfer of credits toward a baccalaureate degree.

- How is it consistent with the mission of the institution?

The mission of IPFW is to meet the higher education needs of those living in northeast Indiana through a broad range of undergraduate, graduate and continuing education programs that support regional needs and support excellence in teaching and learning. The Bachelor of Science in Dental Technology will fulfill the need for higher education for dental technology graduates, leading to expanded career opportunities.

- How does this program fit into the institution's strategic and/or academic plan?

The Bachelor of Science in Dental Technology degree is in harmony with IPFW's Strategic Plan in a number of ways. As published in the document titled *Goals, Strategic Directions and Action Priorities*, IPFW values

- **offering graduate and undergraduate programs that meet the highest standards in their disciplines.**
- **improving student learning and success.**
- **promoting multiple methods of teaching and course delivery to improve access to student success.**
- **assuring the quality and effectiveness of academic programs through accreditation, program review and assessment of student learning.**
- **sharing university expertise, services and support throughout northeast Indiana.**

With the implementation of the BS degree, the program will continue to maintain high academic standards for students by complying with the American Dental Association's accreditation standards, participating in ongoing program review and striving to achieve continual assessment of student learning. In 2013, IPFW dental technology graduates ranked 3rd in the nation in their Recognized Graduate (RG) National Board Examination. Students enrolled in the BSDT completion degree will provide additional services for underserved members of the community through internships and community activities.

Due to limited laboratory facilities, the two years identified as the professional dental technology curriculum must be completed as a cohort of full-time students. However, many of the prerequisite, general education and specialty concentration core courses are currently offered evenings, online or at various times during the week to improve flexibility in scheduling and allow successful completion of degree requirements.

Students who are unable to complete the program with their cohort due to special circumstances may be readmitted on a case-by-case basis following a program's review.

- How does this program build upon the strengths of the institution?

The IPFW Dental Technology Program will be able to graduate bachelor degree students who are better prepared to assume leadership roles and additional responsibilities within the evolving health care professions. There is no other dental technology degree program within a five state radius. Therefore, this degree serves the mission of the university by meeting the needs of the northeast Indiana community and beyond. Graduates will be prepared to continue their professional growth and development through life-long learning, including having options for admission into one of several graduate programs.

Appendix1: Institutional Rationale, Detail

IPFW Baccalaureate Framework:
http://new.ipfw.edu/academics/programs/baccalaureate-framework.html

(Also see page 16 of this document for the BSDT Learning Outcomes)

IPFW Mission, Values and Vision:
http://new.ipfw.edu/about/strategic-plan/mission-values-vision.html

IPFW Goals, Strategic Directions and Action Priorities:
http://new.ipfw.edu/about/strategic-plan/goals-strategic-directions.html

b. State Rationale

- How does this program address state priorities as reflected in *Reaching Higher, Achieving More*?

The BSDT degree mirrors the state priorities reflected in *Reaching Higher, Achieving More* in a number of aspects. This degree will

- **increase the knowledge, skills and level of degree attainment needed for satisfactory lifetime employment in the graduate's chosen field.**

- **create a rigorous competency-based degree with clearly defined learning outcomes and assessments.**

- **create an efficient pathway for associate degree dental technologists to complete a baccalaureate degree in a timely manner.**

- **offer a seamless transfer of associate degree credits toward completion of baccalaureate degree requirements.**

- **create an affordable completion degree that offers working dental technicians options for evening classes, flexible scheduling and online courses.**

- **respond to the changing climate in health care delivery systems and address a growing demand for graduates who are better prepared academically for an evolving profession.**

- **offer an innovative approach to dental technology education by incorporating multiple areas of specialization in one degree.**

- **maintain academic rigor and a standard of academic excellence valued by the dental profession and assured by the American Dental Association Commission on Dental Accreditation (ADA CODA).**

c. <u>Evidence of Labor Market Need</u>

i. National, State, or Regional Need

- Is the program serving a national, state, or regional labor market need?

Both the four-year BSDT degree and the bachelor completion degree will focus on meeting the needs of dental technicians locally, statewide, and nationally. According to the National Association of Dental Laboratories (NADL) research reports, over 85% of dental laboratory owners indicate there continues to be a market need for dental technology program graduates. Employment in the dental technology profession is projected to increase by 14% between 2008 and 2018. In 2012 alone, there was a 3.2% increase in employment from 2011. (NADL 2013 Business Survey: Executive Summary) Article available upon request.

From a national standpoint, the 2010 Dental Laboratory report, *The Golden Quarter Century,* addressed the need for growth in the profession. "We see true promise and steady growth in laboratory sales. There will be no decline in the demand for dental services, rather the demand will grow." https://nadl.org/certification/dental-lab-career.cfm

For the first time in history, the number of dentists graduating from American dental schools is lower than the number of dentists who are retiring or leaving clinical dentistry. As indicated earlier, the current curriculum in dental schools has greatly reduced education in the fabrication of oral prosthetics due to additional course load demands in other areas. Therefore, the demand for dental technology programs that graduate highly skilled, competent, well-educated technicians will continue to be critical for the delivery of quality dentistry to consumers.

"To maintain the projected adequacy of the dental workforce, the numbers of formally educated allied dental professionals must increase to keep up with the increase in the aggregate number or dentists, even if allied professional roles and responsibilities are extended."

http://www.adea.org/workarea/downloadasset.aspx?id=2551. Page 2

ii. Preparation for Graduate Programs or Other Benefits

- Does the program prepare students for graduate programs or provide other benefits to students besides preparation for entry into the labor market?

The academic rigor of the BSDT degree will prepare graduates for admission into graduate programs. Appropriate fields of graduate study include degrees in adult education, public administration, organizational leadership and supervision and dentistry.

iii. Summary of Indiana DWD and/or U.S. Department of Labor Data

- Summarize the evidence of labor market demand for graduates of the program as gleaned from employment projections made by the Indiana Department of Workforce Development and/or the U.S. Department of Labor?

According to the Indiana Department Workforce Development's fall 2012 Report (www.hoosierdata.in.gov/docs/hwhd/hwhd2010_2012-EGR5.pdf), ten year growth projections from 2008-2018 predict an 18% increase in employment for dental technologists.

The dental technology profession is listed 31st in Indiana's Region 1 (Jasper, Lake, LaPorte, Newton, Porter, Pulaski, and Starke Counties) on the Indiana Department Workforce Development's "50 Hottest Jobs" website with an annual growth of 1.7% and listed 37th in Region 3 (Adams, Allen, DeKalb, Grant, Huntington, LaGrange, Noble, Steuben, Wabash, Wells, and Whitley Counties) with an annual growth of 2.7%. www.hoosierdata.in.gov/docs/hh50/hh50regions.xls

The 2012-2013 U.S. Department of Labor's *Occupational Outlook Handbook* (OOH) indicates the demand for dental technicians is expected to increase by 3% between 2010 and 2020. According to OOH, this increase will be the result of a number of issues.

"As cosmetic prosthetics, such as veneers and crowns, become less expensive, there should be an increase in demand for these appliances. Accidents and poor oral health, which can cause damage and loss of teeth, will continue to create a need for dental technician services. Dental technician services will be in demand, as dentists work to improve the aesthetics and function of patients' teeth."
http://www.bls.gov/ooh/production/dental-and-ophthalmic-laboratory-technicians-and-medical-appliance-technicians.htm (visited *May 21, 2014*)

Additionally, national predictions indicate

- **ongoing research linking oral health and general health will increase the number of Americans seeking routine or preventive dental care.**
- **an increasing number of older Americans will maintain all or most of their teeth for their lifetimes.**
- **federal mandates to increase access to health care will encourage dentists to work with more dental technicians to assist in expanding their practices to meet increased public demands.**

***Appendix 2*: Summary of Indiana DWD and/or U.S. Department of Labor Data, Detail** *(This appendix should contain the detailed tables, upon which the summary of the labor market demand is based.)*

Employment Projections for Dental Technicians, 2012-2022	
Number of Employed Dental Technicians* in 2012	39,000
Projected Employment in 2022	40,000
Percentage of Change	+ 3%

Source: U.S. Bureau of Labor Statistics, Employment Projections Program

Employment Projections for Indiana Dental Technicians, 2008-2018	
Number of Employed Dental Technicians in 2008	498
Projected Employment in 2018	588
Percentage of Change	+ 18%

Source: Indiana Department of Workforce Development

iv. National, State, or Regional Studies

- Summarize any national, state, or regional studies that address the labor market need for the program.

Common themes appear when researching national studies related to the labor market need for the baccalaureate degree and degree completion programs. (Appendix 3)

- **Dental technology graduates complete an average of 72 college credits or more in fulfilling requirements for associate degrees from ADA CODA accredited dental technology programs.**

- **Additional background in technology, advanced clinical skills, multi-cultural health care, critical thinking and ethical decision making skills, evidence-based practice models, inter-professional communication and collaboration skills needed for future roles in health care are difficult to add to an already crowded associate degree.**

- **There is a growing demand for baccalaureate degree completion programs that will accept common associate degree courses.**

- **Dental technicians who are educated to the bachelor or master degree level expand their opportunities for career advancement and flexibility.**

- **Diverse career pathways in dentistry are currently being developed or will be developed in the future as the national health care system seeks allied health care providers with strong educational foundations and training to improve access to care for millions of Americans. Completing a bachelor and graduate degree in a dental-related field will provide greater employment opportunities for dental technicians in the future.**

- **Approximately 25% of the U.S. population is edentulous, and even a greater number of individuals over the age of 65 years will be prone to being partially edentulous. This increases the need for dental prosthetics and education in dental implants, utilizing the dental technologist to a greater degree.**

***Appendix 3*: National, State, or Regional Studies, Detail** *(This appendix should contain links to the studies cited or the studies themselves.)*

American Dental Education Association, *Unleashing the Potential*, Washington, DC, 2006.
http://www.adea.org/about_adea/governance/ACAPDToolkit/Documents/Articles/Unleashing_the_Potential.pdf

"How to get to "Yes" with Geriatric Dental Implants patients," *Dental Economics.com. (April 2014)*
http://www.dentaleconomics.com/content/dam/de/print-articles/Volume%20104/Issue%205/1404cei_Shapira_web.pdf

"'Dentistry in a Decade': Recent Lessons from the Adult Dental Health Survey," *Dental Update,* December 2011
http://www.bdta.org.uk/uploads/PDFs/Dentistry%20in%20a%20Decade%20winning%20article.pdf

v. Surveys of Employers or Students and Analyses of Job Postings

- Summarize the results of any surveys of employers or students and analyses of job postings relevant to the program.

Students

Enrolled 2013/2014 students and 2013 graduates of the IPFW Dental Technology Program were surveyed in 2014 to evaluate their level of interest in a BSDT degree. The survey response rate was 76% (42/55). Of those responding, 81% stated they would be interested in pursuing a BSDT completion degree at IPFW.

***Appendix 4*: Surveys of Employers or Students and Analyses of Job Postings, Detail** *(This appendix should contain links to the surveys or analyses cited, or the documents themselves.)*

An analysis of student survey responses are included as Appendix 4 on page 20 at the end of this document.

Links to dental technology job postings for graduates with advanced degrees include:

Dentsply Job Openings in America
https://career5.successfactors.eu/career?career_ns=job_listing&company=DENTSPLY&navBarLevel=JOB_SEARCH&rcm_site_locale=en_US&career_job_req_id=13144&selected_lang=en_US&jobAlertController_jobAlertId=&jobAlertController_jobAlertName=&_s.crb=LrTUl0VpgBoLc060IICp6CxBhxE%3d (July 2014)

https://career5.successfactors.eu/career?career_ns=job_listing&company=DENTSPLY&navBarLevel=JOB_SEARCH&rcm_site_locale=en_US&career_job_req_id=13344&selected_lang=en_US&jobAlertController_jobAlertId=&jobAlertController_jobAlertName=&_s.crb=LrTUl0VpgBoLc060IICp6CxBhxE%3d (July 2014)

American Dental Education Association
http://www.adea.org/DentEdJobs.aspx

U.S. Department of Health and Human Services, Indian Health Services
http://www.ihs.gov/dentistry

vi. Letters of Support

- Summarize, by source, the letters received in support of the program.

Letters of support for the BSDT degree and the bachelor completion degree were requested from the dental technology educators, dental technology profession leaders, and the dental school dean listed below. As experts in their fields, they are able to address the entry-level educational requirements for dental technicians seeking employment in alternative practice settings.

Name	Title	Institution/Corporation	Area of Expertise
John Williams, DDS	Dean	Indiana University School of Dentistry, Indianapolis, IN	Dental Education
Gary Iocco and Bennett Napier, CAE	President Chief Staff Executive	National Association of Dental Laboratories (NADL), Tallahassee, FL	Certified Dental Technician
Patricia S. Crampton	Managing Director	Association of Indiana Dental Laboratories (AIDL)	Dental Technology
Burney M. Croll, DDS, PC	Executive Director of the Dental Laboratory Summit Council; President of the Northeastern Gnathological Society	Self employed	Prosthodontics
Chris Bormes, BBA, MICOI	President	PREAT Corporation, Santa Barbara, CA	Dental Technology & Implantology
Myles K. Hanson, BS	Partner/Technical Advisor	Nobilium-CMP Industries, Albany, NY	Dental Technology

***Appendix 5*: Letters of Support, Detail** *(This appendix contains the letters of support for the program.)*

See Appendix 5 for letters of support.

3. Cost of and Support for the Program

a. Costs

i. Faculty and Staff

- Of the faculty and staff required to offer this program, how many are in place now and how many will need to be added (express both interms of number of full-and part-time faculty and staff, as well as FTE faculty and staff)?

Three full-time faculty positions are allocated to the program. There are currently two full-time faculty positions, one of which is the program director, Brooke Pratt. In addition to her teaching responsibilities, Professor Pratt is given 25% faculty release time to fulfill her administrative responsibilities as the program director. The IPFW Dental Technology Program is requesting one additional full-time faculty position. The third full-time position is needed to teach core courses currently being taught by limited-term lecturers.

Currently, the program employs 8 part-time faculty. Once a full-time position is filled, this number would decrease to 5 part-time faculty.

The program shares one full-time Department of Dental Education secretary with the Dental Assisting and Dental Hygiene Programs.

Appendix6: Faculty and Staff, Detail *(This appendix should contain a list of faculty with appointments to teach in the program and a brief description of new faculty positions yet to be filled.)*

Full-time Faculty	Titles
Brooke O. Pratt, M.P.M., CDT, TE	Visiting Instructor* Director, Dental Technology Program Department of Dental Education, Dental Technology Program
Jennifer D. Klepper, M.P.M., CDT, TE	Visiting Instructor* Department of Dental Education, Dental Technology Program
Full-time Faculty	Clinical Assistant Professor Department of Dental Education, Dental Technology Program

*These will become full-time clinical positions.

ii. Facilities

- Summarize any impact offering this program will have on renovations of existing facilities, requests for new capital projects (including a reference to the institution's capital plan), or the leasing of new space.

No additional facilities or renovations will be required. The additional bachelor completion degree students will utilize existing laboratory and off-campus clinical facilities to a greater extent. Increasing the number of students at extramural sites and internship facilities will positively impact the quantity and quality of dental health care services provided to underserved dental clients in the community.

Appendix 7: Facilities, Detail

Not applicable.

iii. Other Capital Costs (e.g. Equipment)

- Summarize any impact offering this program will have on other capital costs, including purchase of equipment needed for the program.

Appendix8: Other Capital Costs, Detail

See Appendix 8 for 2014-2015 kit costs.

b. Support

i. Nature of Support (New, Existing, or Reallocated)

- Summarize what reallocation of resources has taken place to support this program.

Reallocation of a full-time Dental Technology Faculty position will be required to fulfill the personnel needs.

- What programs, if any, have been eliminated or downsized in order to provide resources for this program?

The Associate of Science Degree in Dental Technology will be eliminated, and those resources would be utilized to support the BSDT program.

ii. Special Fees above Baseline Tuition

- Summarize any special fees above baseline tuition that are needed to support this program.

Instrument kits are purchased by students upon acceptance into the program and utilized throughout their educational experience. Currently, the kit cost is $2400.00 for the first year and $400.00 for

second year.
Students in the dental technology program will pay between a $100 and $250 semester lab fee, which has been implemented by the university to defer the cost of disposable materials used in the laboratory. The range in cost will depend on the number of laboratory courses offered in a semester. These lab fees offset the higher cost of student lab kits.

4. Similar and Related Programs

a. **List of Programs and Degrees Conferred**

i. Similar Programs at Other Institutions

Campuses offering (on-campus or distance education) programs that are similar:

- CHE staff will summarize data from the Commission's Program Review Database on headcount, FTE, and degrees conferred for similar programs in the public sector, as well as information on programs in the non-profit and proprietary sectors, to the extent possible. *CHE Appendix A: Similar Programs at Other Institutions, Detail (This appendix will contain back-up tables for the summary.)*

- Institutions may want to supplement this data with supplementary contextual information, such as relevant options or specializations or whether or not programs at other institutions are accredited or lead to licensure or certification.

All nineteen ADA CODA accredited dental technology programs across the country offer associate degrees only at this time. IPFW's baccalaureate degree will be the only one available nationally.

ii. Related Programs at the Proposing Institution

- CHE staff will summarize data from the Commission's Program Review Database on headcount, FTE, and degrees conferred for related programs at the proposing institution. *CHE Appendix B: Related Programs at the Proposing Institution, Detail (This appendix will contain back-up tables for the summary.)*

b. List of Similar Programs Outside Indiana

- If relevant, institutions outside Indiana (in contiguous states, MHEC states, or the nation, depending upon the nature of the proposed program) offering (on- campus or distance education) programs that are similar:

Currently, there are no dental technology baccalaureate degrees or baccalaureate completion degree programs in the United States.

c. Articulation of Associate/Baccalaureate Programs

- For each articulation agreement, indicate how many of the associate degree credits will transfer and apply toward the baccalaureate program.

It is anticipated that all of the courses completed at accredited colleges and universities will transfer into this degree. Dental technology professional courses must be completed at an ADA-accredited program in the United States. The IPFW Office of Admissions will be a valuable resource in determining course equivalencies for courses transferred from other colleges and universities. Students who complete associate degrees at other institutions must meet IPFW residency requirements and enter with a cumulative grade point average of 2.5 or higher.

Appendix 9: Articulation of Associate/Baccalaureate Programs, Detail *(This Appendix should contain the actual articulation agreements relevant to the proposed program.)*

There are no articulation agreements with other dental technology programs.

d. Collaboration with Similar or Related Programs on Other Campuses

- Indicate any collaborative arrangements in place to support the program.

There are no collaboration arrangements with other campuses at this time.

5. Quality and Other Aspects of the Program

a. Credit Hours Required/Time To Completion

- Credit hours required for the program and how long a full-time student will need to complete the program.

The BSDT degree requires the completion of 120 credit hours and can be completed by a full-time student in four years.

Appendix 10: Credit Hours Required/Time To Completion, Detail *(This appendix should contain the semester-by-semester, course-level detail on the program curriculum, including how long it will take to complete the program, assuming full-time study.)*

Appendix 10.a BSDT Four-Year Curriculum, pages 29 and 30
Appendix 10.b BSDT Completion Degree Curriculum, page 31

b. Exceeding the Standard Expectation of Credit Hours

- If the associate or baccalaureate degree program exceeds 60 or 120 semester credit hours, respectively, summarize the reason for exceeding this standard expectation.

Pre-dental Option:
If students need to complete requirements for acceptance into one of the nation's dental schools, an additional 6 credit hours would be required. The dental technology core courses would remain the same; however, additional science courses meet the requirements for dental school as well as meeting general education requirements.

Appendix 11: Exceeding the Standard Expectation of Credit Hours, Detail

Appendix 11.a BSDT Four-Year Curriculum in Pre-dental
Appendix 11.b BSDT Completion Degree Curriculum

c. Program Competencies or Learning Outcomes

- List the significant competencies or learning outcomes that students completing this program are expected to master.

Learning Outcomes for the Bachelor of Science in Dental Technology

IPFW Baccalaureate Framework	Learning Outcomes for BSDT Graduates
1. Acquisition of Knowledge	Demonstrate knowledge, skills, and values necessary for positions of responsibility in a variety of health care, educational, clinical, business, research, and community settings. Demonstrate knowledge and skills necessary to become responsible dental professionals and leaders in local, regional, national and international organizations and communities.
2. Application of Knowledge	Evaluate current dental literature and apply that knowledge to make sound, evidence-based decisions and continue life-long learning.
3. Personal and Professional Values	Demonstrate highest levels of personal integrity and professional ethics in the delivery of dental technology services in diverse practice settings.
4. A Sense of Community	Promote the dental technology profession through service learning activities, affiliations with professional organizations, and collaborative partnerships within the community.

5. Critical Thinking and Problem Solving	Demonstrate proficiency in critical thinking, reasoning, questioning, and decision-making skills.
6. Communication	Develop oral, written, and multimedia skills necessary to communicate effectively with diverse populations in a variety of professional and educational settings.

d. Assessment

- Summarize how the institution intends to assess students with respect to mastery of program competencies or learning outcomes.

The IPFW Dental Technology Program will continue to submit annual assessment reports to the ADA Commission on Dental Accreditation, the College of Health and Human Services assessment committee, and the campus assessment committee. Assessment and ADA CODA reports will be used to determine the overall success of the program and areas for improvement. In addition to student course evaluations of instruction completed for every course each semester, assessment measures will include:

Outcomes	Expected Level of Performance
Retention and Graduation Rate	90% of students admitted into the program will graduate on time.
Pass Rate on National Licensing Examination	95% of graduates will pass all licensing examinations.
Job Placement Rate	90% of graduates will be employed within six months of graduation.
Alumni Satisfaction Surveys	Graduates will rate the program above average in all areas.
Employer Satisfaction Surveys	Employers will rate graduates' abilities above average in all areas.
Community Dentistry, Service-Learning, Extramural and Internship Evaluations	Evaluators will rate students' abilities above average in all areas of performance.

e. Licensure and Certification

Graduates of this program will be prepared to earn the following**:**

- State License:

  Not applicable.

- National Professional Certifications (including the bodies issuing the certification):

  Students are eligible to take the Recognized Graduate (RG) in Dental Technology examination offered through the National Board of Certification (NBC) for Dental Technology upon graduation. Passing this initial examination qualifies graduates to take advanced certification in areas such as Complete Dentures, Removable Partial Dentures, Dental Ceramics, Crown & Bridge, Orthodontics, and Dental Implants.

- Third-Party Industry Certifications (including the bodies issuing the certification):

  Not applicable.

f. Placement of Graduates

- Please describe the principle occupations and industries, in which the majority of graduates are expected to find employment.

  In addition to working in private dental laboratories, graduates of the BSDT degree will be eligible for employment in

  - **community dental clinics**
  - **state public health agencies**
  - **hospital-based dental clinics**
  - **dental technology programs (as entry level clinical instructors)**
  - **dental products corporations**
  - **dental research and product development facilities**
  - **dental technology professional organizations, as staff or executive director**
  - **Indian Health Services through the U.S. Department of Health and Human Services**
  - **laboratory owners or managers**
  - **dental company technical trainers/consultants**

- If the program is primarily a feeder for graduate programs, please describe the principle kinds of graduate programs, in which the majority of graduates are expected to be admitted.

  This program will not be utilized as a feeder for graduate programs. However, BSDT graduates will be eligible to apply for admission to advanced degree programs such as

  - **adult education**

- **public administration or management**
- **business administration**
- **organizational leadership and supervision**
- **dental schools (with additional science courses)**

g. Accreditation

- Accrediting body from which accreditation will be sought and the timetable for achieving accreditation.

The IPFW Dental Technology Program is fully accredited by the ADA Commission on Dental Accreditation. Dental technology programs are required to notify the Commission in writing at least 30 days prior to the initiation of major changes. IPFW will be required to list all degree options, including the bachelor completion degree.

- Reason for seeking accreditation.

Not applicable.

6. Projected Headcount and FTE Enrollments and Degrees Conferred

Date: February 2015
Institution/Location: Indiana University-Purdue University/Fort Wayne, IN
Program: Dental Technology

Enrollment Projections (Headcount)	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
	FY2015	**FY2016**	**FY2017**	**FY2018**	**FY2019**
Full-time ASDLT students	20	20	0	0	0
Full-time BSDT students	20	40	60	60	60
Part-time BSDT completion students	10	10	15	15	15
Total	**50**	**70**	**75**	**75**	**75**

Degrees Conferred Projections	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
ASDLT degrees	20	20	20	0	0
BSDT degrees	5	10	15	20	25
Total	**25**	**30**	**35**	**30**	**30**

CHE Code: 12-XX
Campus Code: XXXX
County: Allen
Degree Level: Bachelor
CIP Code:

APPENDIX 4

Survey of Interest in a Bachelor of Science in Dental Technology
Comparison of Dental Technology Students' Responses

	Class of 2015		Class of 2014		Graduates 2013 and Prior	
Number of Respondents	14		12		16	
Response Rate	87.5%		63.2%		80%	
How many years of college have you completed, excluding current year?	1 year	**4**	1 year	**0**	1 year	**0**
	2 years	**6**	2 years	**0**	2 years	**1**
	3 years	**3**	3 years	**5**	3 years	**8**
	4 years	**1**	4 years	**4**	4 years	**2**
	5 years	**0**	5 years	**3**	5 years	**2**
	6 or more years	**0**	6 or more years	**0**	6 or more years	**3**
Have you completed any other college degrees or certificates	Certificate	**0**	Certificate	**4**	Certificate	**0**
	Associate Degree	**0**	Associate Degree	**2**	Associate Degree	**7**
	Bachelor Degree	**0**	Bachelor Degree	**1**	Bachelor Degree	**2**
	Master Degree	**0**	Master Degree	**0**	Master Degree	**1**
	PhD or DDS	**0**	PhD or DDS	**0**	PhD or DDS	**0**
Are you currently taking classes toward an advanced degree?	Yes	**2**	Yes	**1**	Yes	**1**
	No	**12**	No	**11**	No	**15**
If available, would you be interested in completing a Bachelor of Science in Dental Technology at IPFW?	Yes	**13**	Yes	**10**	Yes	**11**
	No	**0**	No	**0**	No	**2**
	Unsure	**1**	Unsure	**2**	Unsure	**3**
If you were taking classes for a BSDT degree, which method of course deliver would you prefer?	Traditional	**8**	Traditional	**5**	Traditional	**5**
	Online	**2**	Online	**4**	Online	**4**
	Hybrid	**4**	Hybrid	**7**	Hybrid	**7**
Which course is of most interest to you?	Dental Implants	**3**	Dental Implants	**3**	Dental Implants	**6**
	CAD/CAM	**7**	CAD/CAM	**8**	CAD/CAM	**8**
	Dental Lab. Bus. Procedures	**4**	Dental Lab. Bus. Procedures	**1**	Dental Lab. Bus. Procedures	**2**

IUPUI

SCHOOL OF DENTISTRY

OFFICE OF THE DEAN
Indiana University
Indianapolis

September 18, 2014

Vicky Carwein, PhD
Chancellor
Indiana University-Purdue University Fort Wayne
2101 East Coliseum Blvd.
Fort Wayne, IN 46805

Dear Chancellor Carwein,

As Dean of the Indiana University School of Dentistry, I support the proposal from Indiana University – Purdue University Fort Wayne (IPFW) to transition the Associate of Science degree in Dental Laboratory Technology to a Bachelor of Science in Dental Technology. The program at IPFW is the only program in the State of Indiana and one of only 19 accredited programs in the country. They supply dental laboratory technicians to dental labs and offices across the state and the region.

The transition of the program from Associate to Bachelor allows for additional educational opportunities in organizational leadership/supervision and in the arts and sciences which assists in the development of communication and critical thinking skills. The proposed curriculum also offers a pathway for students interested in applying to dental school who will have skills in allied dentistry as well as the traditional pre-dental required coursework.

As IPFW considers this innovative program, the new degree will support the changes we see in dental school curriculum that require dentists to rely more heavily on the knowledge and skills of the dental technician to enhance individual practice and provide quality prosthetic devices for patients. In addition, the availability of the baccalaureate degree will open a career path for those with the interest in a career in sales, management/supervision and business ownership. The dental community works together to deliver the highest standard of care for patients which requires that each member of the team be educationally prepared and clinically competent to handle the changing needs of the profession.

In closing, I support the proposal from Indiana University–Purdue University Fort Wayne (IPFW) to transition the Associate of Science degree in Dental Laboratory Technology to a Bachelor of Science in Dental Technology. This new degree will provide a career pathway to distinguish the IPFW Dental Laboratory Technology as "one of a kind" and attract national interest.

Sincerely,

John N. Williams, DMD, MBA
Dean

NADL
National Association of
Dental Laboratories

Established in 1951

July 16, 2014

101 W Ohio St Ste 550 Room CHE
Indianapolis, IN 46204

To the Indiana Commission on Higher Education:

We are writing this letter in support of the proposed Bachelor of Science in Dental Technology degree at Indiana University-Purdue University, Fort Wayne (IPFW). IPFW is one of 19 Dental Laboratory Technology programs accredited through the Commission on Dental Accreditation.

There currently are no Dental Laboratory Technology programs offering a Bachelor's degree in the United States – so the need is imperative. The BSDT degree at IPFW would create an opportunity for Indiana dental laboratory technicians to expand their pathways for both employment and entrepreneurship beyond their current opportunities.

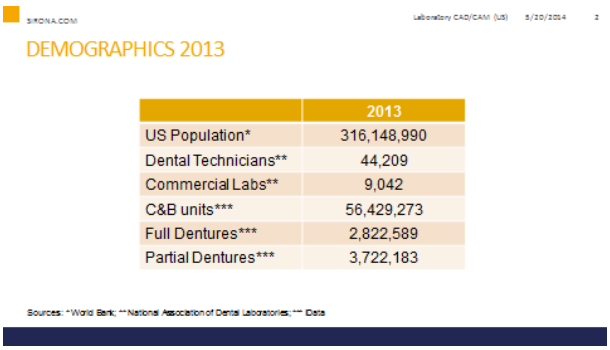
From a national perspective, diverse career pathways are expanding in the field of dental laboratory technology beyond the traditional "bench" technician. While an Associate's degree prepares graduates to enter the setting of a commercial dental laboratory, a minimum of a baccalaureate is necessary to expand opportunities into careers in sales, management/supervision and business ownership.

The dental laboratory industry has transitioned from an analog production manufacturing process to a light manufacturing/medical device manufacturing environment. In many cases, across the country, dental laboratory owners are seeking to employ technicians not only with the applied skills in dental laboratory technology but also candidates with a higher degree of learning with expertise in CAD/CAM technology, graphic design, and engineering. Owners have to recruit students from other disciplines since a Bachelor's degree is not currently available in dental laboratory technology.

The timing of creating such a program in Indiana is very good. The U.S. Department of Labor predicts that there will be over 12,000 openings for dental technicians between now and 2020 due to the aging demographic of dental laboratory technicians. Many of these retiring technicians graduated from a formal educational program and replacing those positions with formally educated students is desired.

The National Association of Dental Laboratories annually conducts third party market research on the industry.

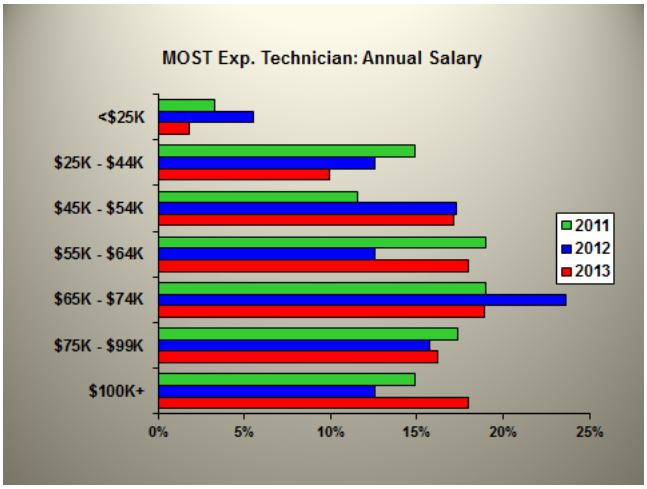
We have provided a few demographic slides from our June 2014, Cost of Doing Business Survey. The data reflects wage and benefits information from the close of calendar year 2013.



325 John Knox Rd, L103 • Tallahassee, FL 32303 • phone: 800.950.1150 850.205.5626 • fax: 850.222.0053 • www.nadl.org

Based on the current market research, the trends show an increasing annual salary for “experienced” dental laboratory technicians. Graduates of a formal education program have an increased chance of being promoted faster and being offered management level positions in a dental laboratory setting.

The research chart below provide a strong argument that a graduate from a bachelors level program would have the ability to earn a very competitive wage in the marketplace.



We appreciate the Commission’s consideration of the IPFW proposal and would be happy to provide additional market research that supports the creation of a bachelor’s level program.

Sincerely,

Gary Iocco
NADL President

Bennett Napier, CAE
NADL Executive Director

325 John Knox Rd, L103 • Tallahassee, FL 32303 • phone: 800.950.1150 850.205.5626 • fax: 850.222.0053 • www.nadl.org

Association of Indiana Dental Laboratories
PO Box 502915
Indianapolis, IN 46250
Phone: 317-823-6191
August 19, 2014

Indiana Commission on Higher Education
101 W. Ohio St., Suite 550 Room CHE
Indianapolis, IN 46204

Commissioners:

I am writing on behalf of the Board of Directors of the Association of Indiana Dental Laboratories in support of the proposed Bachelor Degree in Science and Dental Technology (BDST) at Indiana University-Purdue University at Fort Wayne. IPFW is one of 16 institutions of higher learning offering a dental technology program accredited through the Commission on Dental Accreditation. Currently this is a two-year program.

Rapid changes in dental technology, the number of retiring formally trained technicians, and the demand for technicians skilled in graphic design, engineering, cad/cam technology along with leadership and communication skills justify the transition to a four-year program. As in most industries in this digital age, employers are looking for technicians who offer more than basic competence. They want employees with good communication and leadership skills, employees who can keep up with digital technology and employees who have a broad knowledge of dentistry.

The BSDT degree would better prepare technicians and offer more career opportunities, such as sales, management, and teaching. Consequently, expanding the program from a two-year degree to a four-year degree benefits not only the student but also the employer. With the graying of America and the increased demand for more complex dental procedures, the population will be better served with more highly trained dental technicians.

I hope you will give serious consideration to the implementation of the BSTD at IPFW.

Sincerely yours,

Patricia S. Crampton

Patricia S. Crampton
Managing Director

The mission of AIDL is to promote the dental laboratory industry by advancing professionalism through education.

BURNEY M. CROLL, D.D.S., P.C.

Practice Limited To Prosthodontics
901 Lexington Avenue
New York, NY 10065

(212) 794-1100 Fax (212) 288-9453
info@burneycroll.com
www.burneycroll.com

June 23, 2014

Brooke O. Pratt, MPM, CDT, TE
Director of Dental Laboratory Technology Program
Indiana University-Purdue University Fort Wayne
College of Health and Human Services
Department of Dental Education, Neff Hall, Room 150G
2101 East Coliseum Boulevard
Fort Wayne, Indiana 46805-1499

Re: Bachelor Program in Dental Technology

Dear Indiana Commission for Higher Education,

As a prosthodontist and a member of the advisory board at New York City College of Technology, Department of Restorative Dentistry, I have first-hand knowledge of the skill level of students who complete two-year accredited programs in dental technology that satisfy the American Dental Association's Commission on Dental Accreditation (CODA) standard. As the executive director of the Dental Laboratory Summit Council, I have observed for eight years the national education systems in dental technology and understand the limited educational outcome of a two-year program.

While dentistry has been effective preventing dental disease, the number of patients needing a broad range of prosthetic devices continues to grow. By the year 2020, the number of edentulous patients will reach approximately 38 million. That number is above the baseline for patients requiring individual tooth replacement and reconstruction that result from age, wear and trauma.

The dental technology industry as an integral part of dental health care system requires a robust educational system to continue to provide workers, managers, teachers and innovators with a broad knowledge of dentistry, dental technology and communication skills. The dental technology industry as a manufacturing enterprise requires knowledge of material science, engineering, communication skills as well as an understanding of the principles and process of dental technology. Like other industries, dental technology is subject innovation and digitization that continually displaces the status quo. It is essential to understand and respond to market forces while applying principles that are the bedrock of prosthetic dentistry.

There is a growing need for additional broad training beyond the two-year accredited dental technology programs currently available. Innovation in dental materials and manufacturing process has advanced

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(212) 794-1100 Fax (212) 288-9453
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www.burneycroll.com

dental technology from hand crafted prosthetics to computer designed and manufactured prosthetics. The industry of dental technology nationally and internationally continues to consolidate from small dental laboratories to larger centralized manufacturing facilities.

Industry managers should be consulted to specifically craft a bachelor degree program to meet the needs of the industry. One very important factor that supports the development of programs beyond two-year accreditation is that immigration of dental technicians with bachelors and masters degrees from outside the United States has been blocked and is practically impossible to obtain at this time. Although the classification of dental technicians as unskilled remains in place based upon an earlier invalid survey conducted by the U.S. Department of Labor, Bureau of Labor Statistics, a new survey of dental technicians is currently being conducted. A review of the educational accomplishments of more than ten thousand dental technicians represented by the National Association of Dental Laboratories is underway.

For many reasons, a four-year program in dental technology at the university level is a worthy pursuit. The need for dental prosthetics for our aging population remains at a high level for the foreseeable future. In the area of dental technology, the most pressing reason for expansion to a four-year program is the expansion of the developing manufacturing processes and advances in material science. The demographic graying population of dental technicians who over their careers had the opportunity to develop maturity in the profession and are now approaching retirement must to be replenished with individuals with competence and potential to meet current and future needs. Two-year dental technology programs can only meet the need for entry level dental technicians who have basic competence but have not developed adequate facility to provide complex dental prosthetics. Further, most of the programs, with few exceptions, have the necessary digital equipment, funding and educators to provide more than a basic familiarization with the production of dental prosthetics. A working relationship with commercial and boutique dental laboratories to develop seasoned dental technicians similar to the European and Japanese model does not exist in the US. I hope Indiana University-Purdue University will establish a pilot program including material science, computer manufacturing, and communication skills beyond the basic skills required to contribute to the public welfare in dental technology.

Respectfully submitted,

Burney M Croll DDS

Burney M Croll, DDS
Executive Director of the Dental Laboratory Summit Council
President, the Northeastern Gnathological Society
Member, the American College of Prosthodontics, Prosthodontic Forum

To the Indiana Commission on Higher Education,

We are writing in support of the proposed Bachelor of Science in Dental Laboratory Technology degree at Indiana Purdue University, Fort Wayne. There is a shift in leadership in the Dental Team and we more than ever need highly trained and skilled Dental Technicians. Dentists are not being trained in Removable Prosthetics in Dental School, and with the removable prosthetic market being estimated to grow from $2 Billion to $3.6 Billion by 2019, this is a field with great demand and removable Dental Technicians have a very bright future.

The BSDLT degree at IPFW would create an opportunity for Indiana dental technicians to expand their pathways for employment.

From a national perspective, diverse career pathways are expanding in the field of dental technology as never before. While an associate degree prepares practitioners to enter the laboratory arena, a minimum of a baccalaureate is required for employment in community/public health settings, higher education settings, or dental leadership and sales positions, to name a few. Additionally, the national health care system of the future indicates a need for health care providers with strong educational foundations to provide access to care for millions of underserved Americans.

The next generation Dental Technicians will require more than an education in setting teeth or stacking porcelain; rather, they will need to be skilled communicators able to navigate different digital mediums of communication.

The BSDH degree would address the decline in Dental Technology programs while increasing employment opportunities by offering optional additional career pathways as well as eligibility for admission into a variety of graduate programs. Therefore, we urge you to consider your support of the IPFW BSDLT degree.

Sincerely,

Chris Bormes

President

100 S. 4th St., Grover Beach, CA 93433 phone: 800.232.7732 fax: 805.693.8106 www.preat.com

Myles K. Hanson
7719 Oakhill Park Dr.
San Antonio, TX 78249

May 22, 2014

Brooke Pratt, M.P.M., CDT, TE
Director of Dental Technology Program
Indiana University-Purdue University Fort Wayne
2101 East Coliseum Boulevard
Fort Wayne, Indiana 46805-1499

Dear Ms. Pratt,

I am writing to support the proposed Bachelor Degree in Dental Technology at Indiana University-Purdue University Fort Wayne. The Dental Technology field has evolved and is now very high tech and competitive. There are several career paths in the dental technology arena. The current Associate Degree program prepares the student to be a technician with limited potential for upward mobility.

Each Dental Laboratory Corporation in the United States manages between 20 and 50 laboratories. Therefore, there are several corporate management and executive positions available which require a Bachelor's degree. Dental laboratory manufacturing and supply companies also maintain the same degree requirements for their sales and education positions. In addition, with the advent of CAD/CAM and 3D printing, technicians are required to gain increased skill and knowledge levels in information technology.

I graduated from Dental Laboratory School in 1972 and completed a degree in Occupational Education in 1979. The techniques in this field have advanced exponentially in the last ten years. Your program would prepare students to excel in the future.

Sincerely,

Myles K. Hanson, BS
Partner/Technical Advisor
CMP Industries, LLC
413 North Pearl Street
Albany, NY 12207
210-473-5144 Cell
hansonb@nobilium.com

YEAR ONE - Prerequisite General Education Courses

YEAR ONE - FALL			
A.1	ENG W131	English Composition	3
B.4	CHM 104	Living Chemistry	3
B.5	SOC S161	Sociology	3
B.5	PSY 120	Psychology	3
		Elective	3
	TOTAL		**15**

	YEAR ONE - SPRING		
B.6	PHIL312	Medical Ethics	3
A.2	COM 114	Speech/Communications	3
	OLS 252	Human Relations in Organization	3
A.3	**Select One of the Following**		
	MA 153	Algebra and Trigonometry I	3
	STAT 125	Communication with Statistics	3
	TOTAL		**12**

YEAR ONE - SUMMER I			

	YEAR ONE - SUMMER II		

YEAR TWO - Dental Technology Professional Curriculum

YEAR TWO - FALL			
	DLTP D112	Dental Anatomy	4
	DLTP D114	Dental Occlusion	3
B.7	BUS W100	Principles of Bus. Administration	3
B.5	OLS 268	Elements of Law	3
		Elective	3
	TOTAL		**16**

	YEAR TWO - SPRING		
	DLTP D111	History, Ethics, Organization	1
	DLTP D113	Basic Physics, Chem., and Dental M	5
	OLS 274	Applied Leadership	3
	OLS 375	Training Methods	3
		Elective	3
	TOTAL		**15**

YEAR TWO - SUMMER I			
	TOTAL		

	YEAR TWO - SUMMER II		
	TOTAL		

YEAR THREE - Dental Technology Professional Curriculum

YEAR THREE - FALL			
	DLTP D125	Crown and Bridge Prosth. I	3
	DLTP D126	Ortho./Pedo. Appliances I	3
	DLTP D127	Complete Denture Prosth. I	4
	DLTP D128	Partial Denture Prosth. I	3
	DLTP D129	Dental Ceramics I	3
	TOTAL		**16**

	YEAR THREE - SPRING		
	DLTP D215	Crown and Bridge Prosth. II	4
	DLTP D216	Ortho./Pedo. Appliances II	3
	DLTP D217	Complete Denture Prosth. II	3
	DLTP D218	Partial Denture Prosth. II	3
	DLTP D219	Dental Ceramics II	4
	TOTAL		**17**

YEAR THREE - SUMMER I			
	TOTAL		

	YEAR THREE - SUMMER II		
	TOTAL		

YEAR FOUR - Dental Technology Professional Curriculum

YEAR FOUR - FALL			
	DLTP D320	Dental Implants	3
	DLTP D321	Dental Lab. Bus. Procedures	3
	OLS 376	Human Resource Issues	3
		Elective	3
		Elective	3
	TOTAL		**15**

	YEAR FOUR - SPRING		
C.8	DLTP D405	Practical Lab. Experience	6
	Select Eight Credits of the Following:		
	DLTP D400	Spec. Ortho./Pedo.	4
	DLTP D401	Spec. Fixed Prosthodontics	4-8
	DLTP D402	Spec. Removable Prosthodontics	4-8
	TOTAL		**14**

Five electives (15 credit hours) must be selected.

Recommended Electives		
ENG W233	Intermediate Expository Writing	3
ENGR 120	Graph Com & Spatl Anly	3
COM 318	Principles In Persuasion	3
COM 325	Interviewing: Principles & Pract.	3
OLS 320	Customer Service & Commitment	3
OLS 342	Interviewing Strategies in Organ.	3
OLS 454	Diversity in Management	3
OLS 485	Leadership for Team Building	3
FINA N108	Intro to Drawing for Nonmajors	3
FINA S165	Ceramics for Nonmajors	3
FINA S239	Painting for Nonmajors	3
NUR 106	Medical Terminology	3
NUR 309	Transcultural Healthcare	3
VCD P204	Intro to 3-D Design	3
VCD P310	Intro to 3D Computer Modeling	3

Appendix 10.b
Bachelor of Science in Dental Technology Completion Degree Curriculum Sequence

	Credits	Total
Associate of Science in Dental Laboratory Technology • Prerequisite General Education Courses (A.1, A.2, A.3, B.7) • Professional Dental Laboratory Technology Courses	 12 Credits 60 Credits	**72 Credits**
OLS Concentration Requirements • OLS 252 Human Relations in Organizations (B.5) • OLS 268 Elements of Law (B.5) • OLS 274 Applied Leadership • OLS 375 Training Methods • OLS 376 Human Resource Issues	 3 Credits 3 Credits 3 Credits 3 Credits 3 Credits	**15 Credits**
Additional General Education Courses • **Category B: Interdisciplinary or Creative Ways of Knowing** o B.4 Scientific Ways of Knowing o B.6 Humanistic and Artistic Ways of Knowing • **Category C: Capstone** o C.8 Capstone Experience • **Electives** o Any course A.1, A.2, A.3, B.4, B.5, B.6, B.7	 3 Credits 3 Credits 3 Credits 6 Credits	**15 Credits**
Additional Required Courses • Electives (Not required to be approved General Education courses)	18 Credits	**18 Credits**
		120 Credits

YEAR ONE - Prerequisite General Education Courses

YEAR ONE - FALL			
A.1	ENG W131	English Composition	3
B.4	CHM 115	General Chemistry w/Lab	4
	BIOL 108	Biology of Plants	4
A.3	MA 229	Calculus for the Managerial, Soci	5
B.5	PSY 120	Psychology	3
	TOTAL		**19**

YEAR ONE - SPRING			
A.2	COM 114	Speech/Communications	3
	CHM 116	General Chemistry w/Lab	4
	BIOL 109	Biology of Animals	4
B.5	SOC S161	Sociology	3
	TOTAL		**14**

YEAR ONE - SUMMER I			

YEAR ONE - SUMMER II			

YEAR TWO - Dental Technology Professional Curriculum

YEAR TWO - FALL			
	DLTP D112	Dental Anatomy	4
	DLTP D114	Dental Occlusion	3
	CHM 254	Organic Chemistry Lab	1
	CHM 255	Organic Chemistry	3
	Select One of the Following		
	BIOL 203	Human Antatomy & Physiology I	4
	BIOL 215	Basic Human Anatomy	4
	TOTAL		**15**

YEAR TWO - SPRING			
	DLTP D111	History, Ethics, Organization	1
	DLTP D113	Basic Physics, Chem., and Dental	5
	CHM 256	Organic Chemistry	3
	CHM 258	Organic Chemistry Lab	1
	Select One of the Following		
	BIOL 204	Human Anatomy & Physiology II	4
	BIOL 216	Basic Mammalian Physiology	4
	TOTAL		**14**

YEAR TWO - SUMMER I			
	TOTAL		

YEAR TWO - SUMMER II			
	TOTAL		

YEAR THREE - Dental Technology Professional Curriculum

YEAR THREE - FALL			
	DLTP D125	Crown and Bridge Prosth. I	3
	DLTP D126	Ortho./Pedo. Appliances I	3
	DLTP D127	Complete Denture Prosth. I	4
	DLTP D128	Partial Denture Prosth. I	3
	DLTP D129	Dental Ceramics I	3
	TOTAL		**16**

YEAR THREE - SPRING			
	DLTP D215	Crown and Bridge Prosth. II	4
	DLTP D216	Ortho./Pedo. Appliances II	3
	DLTP D217	Complete Denture Prosth. II	3
	DLTP D218	Partial Denture Prosth. II	3
	DLTP D219	Dental Ceramics II	4
	TOTAL		**17**

YEAR THREE - SUMMER I			
	TOTAL		

YEAR THREE - SUMMER II			
	TOTAL		

YEAR FOUR - Dental Technology Professional Curriculum

YEAR FOUR - FALL			
B.7	BUS W100	Principles of Bus. Admin.	3
B.4	PHYS 220	General Physics I	4
B.5	NUR 309	Transcultural Healthcare	3
	BIOL 220	Micro for Health Prof.	4
B.6	PHIL312	Medical Ethics	3
	TOTAL		**17**

YEAR FOUR - SPRING			
C.8	DLTP D405	Practical Lab. Experience	6
	PHYS 221	General Physics II	4
	Select One of the Following:		
	DLTP D400	Spec. Ortho./Pedo.	4
	DLTP D401	Spec. Fixed Prosthodontics	4
	DLTP D402	Spec. Removable Prosthodontics	4
	TOTAL		**14**

All DLTP Courses must be taken in the listed order. DLTP courses may not be taken until accepted into the program. CHEM 533 Intro to Biochemistry is strongly suggested if applying to schools other than Indiana School of Dentistry

The following course are typically offered during summer sessions:

BIOL 203
BIOL 204
BIOL 220
CHEM 115
CHEM 116
COM 114
ENG W131
NUR 309
PSY 120
PHIL 312
PHYS 220
PHYS 221
SOC S161

Appendix 11.b
Bachelor of Science in Dental Technology-Pre-Dental Completion Degree Curriculum Sequence

	Credits	Total
Associate of Science in Dental Laboratory Technology		
• **Prerequisite General Education Courses (A.1, A.2, A.3, B.7)**	**12 Credits**	**72 Credits**
• **Professional Dental Laboratory Technology Course**	**60 Credits**	
Pre-Dent Concentration Requirements		
• **Biological Sciences – 20 Credit Hours**		
o **BIOL 108 Biology of Plants**	**4 Credits**	**20 Credits**
o **BIOL 109 Biology of Animals**	**4 Credits**	
o **BIOL 203 Human Anatomy & Physiology I or**	**4 Credits**	
o **BIOL 215 Basic Human Anatomy**		
o **BIOL 204 Human Anatomy & Physiology II or**	**4 Credits**	
o **BIOL 216 Basic Mammalian Physiology**		
o **BIO 381 Cell Biology**	**4 Credits**	
• **Chemistry – 15 Credit Hours**		
o **CHM 115 General Chemistry w/Lab (B.4)**	**4 Credits**	**16 Credits**
o **CHM 116 General Chemistry w/ Lab**	**4 Credits**	
o **CHM 254 Organic Chemistry I Lab**	**1 Credit**	
o **CHM 255 Organic Chemistry I**	**3 Credits**	
o **CHM 256 Organic Chemistry II**	**3 Credits**	
o **CHM 258 Organic Chemistry II Lab**	**1 Credit**	
• **Physics – 8 Credit Hours**		
o **PHYS 220 General Physics I (B.4)**	**4 Credits**	**8 Credits**
o **PHYS 221 General Physics II**	**4 Credits**	
• **Social Sciences – 3 Credit Hours**		
o **See ASDLT Prerequisites above -A.2**	**-**	**-**
• **Humanities – 3 Credit Hours**		
o **See ASDLT Prerequisites above-A.1**	**-**	**-**
Additional General Education Courses		
• **Category B: Interdisciplinary or Creative Ways of Knowing**		
o **B.5 Social and Behavioral Ways of Knowing (See concentration requirements above)**	**3 Credits**	**13 Credits**
o **B.6 Humanistic and Artistic Ways of Knowing (See ASDLT Prerequisites above)**	**3 Credits**	
• **Category C: Capstone***		
o **C.8 Capstone Experience**	**3 Credits**	
• **Electives**		
o **Any course A.1, A.2, A.3, B.4, B.5, B.6, B.7**	**4 Credits**	
		129 Credits

*Note-The BSDT (Pre-Dental) completion degree will require a 3 credit hour Capstone course (C.8) until DLTP D405 is approved. After approval, completion degree will total 126 credit hours.