

Dental Laboratory Technology (Associate of Applied Science)

This program is designed to prepare students for employment as dental laboratory technicians who provide essential support services for dental professionals. Students learn advanced skills and techniques in designing and constructing dental replacements such as crowns, bridges, dentures, and orthodontic appliances.

Course #	Course Title	Lecture	Lab	Clinic	Credit
DLT101	Dental Morphology	70			6
DLT102	Dental Morphology Lab		130		6
DLT151	Crowns and Bridges I	70			6
DLT152	Crowns and Bridges Lab I		130		6
DLT153	Crowns and Bridges II	70			6
DLT154	Crowns and Bridges Lab II		130		6
DLT201	Dental Ceramics I	40			3
DLT202	Dental Ceramics Lab I		160		6
DLT203	Dental Ceramics II	40			3
DLT204	Dental Ceramics Lab II		160		6
DLT251	Complete Denture	35			3
DLT252	Complete Denture Lab		65		3
DLT253	Partial Denture	35			3
DLT254	Partial Denture Lab		65		3
DLT261	Dental Seminar and Practicum Theory	40			3
DLT262	Dental Seminar and Practicum		160		6
BIO102	Introduction to Biology	40			4
BPS102	Business and Professional Speech	40			4
CPS101	Computer Science I	40			4
CRT101	Critical Thinking	40			4
ENG101	Composition I	40			4
MAT101	Algebra	40			4
PSY101	Introduction to Psychology	40			4
	Required Hours and Credits	640	1,000		99

- DLT101 Dental Morphology** – This course provides the fundamentals of anatomical and physiological structure affiliated with cranial, facial, and inter-oral anatomy in relation with construction of fixed and removable prosthetic devices. Students also learn the interrelated structural movements of bones, muscles, and teeth.

- **DLT102 Dental Morphology Lab** – This course continues to provide more complex workings of anatomical and physiological structure affiliated with cranial, facial, and inter-oral anatomy in relation with construction of fixed and removable prosthetic devices.
- **DLT151 Crowns and Bridges I** – This course offers comprehensive and specialized instructions in the design and fabrication of crown and bridge restorations with special emphasis on the techniques used in the artful specialty area of cosmetic dentistry.
- **DLT152 Crowns and Bridges Lab I** – This course utilizes the students to practice crowns and bridges in detail on comprehensive and specialized instructions in the design and fabrication of crown and bridge restorations with special emphasis on the techniques used in the artful specialty area of cosmetic dentistry.
- **DLT153 Crowns and Bridges II** – This course introduces the materials and techniques used in the fabrication of fixed crown and bridge restorations. Topics include: materials used in crown and bridge fabrication, preparatory procedures, fixed crown and bridge fabrication procedures, and post-fabrication procedures.
- **DLT154 Crowns and Bridges Lab II** – This course utilizes the students to practice crowns and bridges in detail on the materials and techniques used in the fabrication of fixed crown and bridge restorations. Students practice on materials used in crown and bridge fabrication, preparatory procedures, fixed crown and bridge fabrication procedures, and post-fabrication procedures.
- **DLT201 Dental Ceramics I** – This course introduces use of porcelain dental materials and its fabrication through hands-on training by learning fundamental techniques for model, dye preparation, and case evaluation. This course covers opaque procedures, porcelain manipulation, basic shade control, firing cycles, and shaping and glazing single unit ceramic restorations utilizing metal ceramic technology.
- **DLT202 Dental Ceramics Lab I** – Students learn and practice basic skills on how to construct metal ceramic restorations for multiple crowns and bridge work by learning multi-unit framework design, porcelain buildup, external and internal staining, corrections and additions, and fabrication of porcelain shoulder margin and laminate veneer. Students are also trained pre- and post-soldering, troubleshooting, principles of color theory and the use of the shade guide. Students comprehensively learn how to make a porcelain core using hard core refractory model techniques; how to build porcelain on the opaque cores; how to apply porcelain on veneering cases; how to prepare and develop porcelain inlays; how to transfer from refractory material to working model; how to make post firing corrections; how to stain and glaze; how to etch veneer for maximum bonding in porcelain veneering cases.

- **DLT203 Dental Ceramics II** – This course helps students become proficient in the use of porcelain dental materials and its fabrication through hands-on training by learning fundamental techniques for model, dye preparation, and case evaluation. This course covers opaque procedures, porcelain manipulation, basic shade control, firing cycles, and shaping and glazing single unit ceramic restorations utilizing metal ceramic technology.
- **DLT204 Dental Ceramics Lab II** – Students learn and practice advanced level on how to construct metal ceramic restorations for multiple crowns and bridge work by learning multi-unit framework design, porcelain buildup, external and internal staining, corrections and additions, and fabrication of porcelain shoulder margin and laminate veneer. Students also learn pre- and post-soldering, troubleshooting, principles of color theory, and the use of the shade guide. Students comprehensively learn how to make a porcelain core using hard core refractory model techniques; how to build porcelain on the opaque cores; how to apply porcelain on veneering cases; how to prepare and develop porcelain inlays; how to transfer from refractory material to working model; how to make post firing corrections; how to stain and glaze; how to etch veneer for maximum bonding in porcelain veneering cases.
- **DLT251 Complete Denture** – This course makes students learn to use a variety of impression and gypsum materials. The casts are used to practice dental procedures such as the fabrication of custom trays and temporary crowns. Students also practice placement and removal of temporary sedative dressings on Typodont manikins according to RDA standards.
- **DLT252 Complete Denture Lab** – This course provides practical experiences in two specialties of dental laboratory technique. Also, designed to strengthen the students' skill and knowledge by experience in the utilization of advanced techniques which gives practical experience in a commercial dental laboratory, this seminar is conducted. Student's laboratory work evaluated for clinical acceptability during each laboratory session. Review for National Certification Examination providing concentrated review of related subject matter pertaining to the recognized graduate examination. Review for the National Certification Examination.
- **DLT253 Partial Denture** – This course helps students learn basic and fundamental techniques in the construction of gold and nickel-chromium partial dentures to include elementary principles of survey and design, model preparation and refractory cast production. Students also learn techniques and procedural application of preformed patterns, investing, casting and finishing metal frameworks.
- **DLT254 Partial Denture Lab** – This course helps students learn advanced theory and techniques in construction of gold and nickel-chromium cast partial dentures. Students also learn the engineering principles in designing tooth/tissue borne and tooth borne removable partial denture prosthesis to include repairs, arrangement of artificial teeth, wax-up, processing and finishing of partial denture bases.

- **DLT261 Dental Seminar and Practicum Theory** - This course introduces students to prepare the beginning level generalist practice with individuals, families, small groups, organizations and communities and also prepare students to practice with diverse populations and promote professional student identities incorporating social work ethics and values.
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General Education Requirements

In addition to the designated courses outlined for each specific field, students seeking an Associate Degree must complete additional general education courses. The six following courses are four credits each, totaling in 24 credits of general education requirements.

- **BIO102 Introduction to Biology** - This course introduces major concepts of cell biology, including cell physiology and structure, molecular biology, genetics, and evolution. Course is a prerequisite for professional health-science programs.
- **BPS102 Business and Professional Speech** - This course focuses on student's awareness, knowledge and recall, comprehension and understanding, and information used in new and different situations. During the course, student will learn 1) Analysis – examination and categorization of pieces of information, 2) Synthesis – combination of information to create something new, and 3) Evaluation – value judgment supported by reasoning.
- **CPS101 Computer Science I** - It studies fundamental computer concepts and methods of object-oriented program development and design. The course also covers language systems and semantics, structured program verification, different language paradigms, and documentation techniques. Students use a structured, high-level object-oriented programming language and learn to use both text-oriented and windows-based user interfaces.
- **CRT101 Critical Thinking** - This course enables the student to identify logical fallacies in selected readings including things written by their classmates and by themselves, demonstrate the capacity for self-critique through the writing of a paper in which they identify alternative assumptions that would lead to different conclusions, and assess the advantages and disadvantages of alternative formulations of any argument. It also teaches to identify and analyze a recent ethical lapse that occurred in a business organization, the nature of the lapse, and provide a possible explanation for the lapse and alternative solutions to prevent similar lapses.

- **ENG101 College Composition** - Through the course, students will learn to write a professional-quality resume, memo, and letter, identify, analyze, and emulate some basic features of a professional report/article typical for their major field. This course also teaches follow the guidelines and do appropriate research to submit a basic grant proposal, use writing to reflect upon the significance of business, technological, and industrial activity for local and global economies, local and global cultures, human health, and the environment, and articulate their response to ethical issues raised by professional practices.
- **MAT101 Algebra** - This course concentrates on making students understand the study skills for success in mathematics and using a calculator, able to set and other basic concepts, and understand the properties of and operations with real numbers.
- **PSY101 Introduction to Psychology** - This course summarizes accountable terminal objectives, explain and give names associated with the major psychology theories, and biological and environmental factors play a role in shaping behavior and development. Students will learn to distinguish between and apply principles of classical conditioning, operant conditioning, and cognitive learning, name and describe stage theories of development relative to physical, cognitive, and psychosocial issues and correctly identify the theorist associated with each, and define abnormal behavior and support the definition, provide examples of situations where counseling or treatment could be advised or necessary.