

COMPOSITE AND FABRICATION TECHNOLOGY (CFT)

CFT A100**3 Units (54 lecture hours)****Introduction to Composites Fabrication****Grading Mode:** Standard Letter**Transfer Credit:** CSU.

This is an introduction to composites fabrication utilizing light timber and polymer membrane technology. The course includes mold making, hand layup, vacuum bagging, and some traditional joinery methods. Through fabrication and assembly, the student will get an overall understanding of how a composite structure is built. The intent of the class is for a student to manage their own project, and opportunities to participate in whole-class capstone projects.

CFT A114**4 Units (54 lecture hours; 54 lab hours)****Contemporary Cabinetmaking****Grading Mode:** Standard Letter**Transfer Credit:** CSU.

Introduction to wood and wood composites as a building material. Introduction to basic wood and machine tools to bring forth the structural and visual potential of the material. The basic skill set includes two-dimensional design and drawing concept development, furniture history, and studio practices. Two items are selected by the staff as a platform for skill mastery demonstration.

CFT A120**4 Units (54 lecture hours; 54 lab hours)****Composite Structures: Prototype Development, Assembly, Repair and Testing****Grading Mode:** Standard Letter**Transfer Credit:** CSU.

This lecture/laboratory course introduces the student to more advanced manufacturing characterization methods unique to isotropic and anisotropic properties found in intermediate composite materials. Mapping of the performance characteristics unique to objects featuring wood, polymers, and high-performance fibers is used to optimize material selection in hybrid manufacturing. This course includes the practical application of intermediate processes and tooling unique to small to medium-sized fabrication organizations. It also reviews the concepts, principles, and methods employed for the destructive and nondestructive evaluation (NDE) of composite structures and materials to comply with industry certification objectives.