

Study Plan

**MDVP Composite Technology program at Techcollege,
Full program: Vocational component (34 weeks) + Personal Growth & Leadership
(PGL) component (4 weeks)**

2025-2026

Schedule of Activities:

Week	Activities
1	<p>PGL component – Start Up: Preliminary training week in Pretoria – 5 days Module 1: 'Preparing for Denmark' (day 1/3 + day 2/3 + day 3/3) Module 2: 'Communication and Presentation' (day 1/4) Module 5: 'The Reflective Learning Approach' (day 1/3)</p>
2	<p>Vocational component – 5 days Module 1: Mould Design, Building and Preparation (5 days) Classroom training in mandatory course working with epoxy and isocyanates Classroom and workshop training in mould preparation and material preparation.</p>
3	<p>Vocational component – 4 days Module 1: Mould Design, Building and Preparation (4 days) Classroom and workshop training in production of simple items with basic materials by means of hand layup technique PGL component – 1 day Module 5: 'The Reflective Learning Approach' (day 2/3)</p>
4	<p>Vocational component – 5 days Module 1: Mould Design, Building and Preparation (5 days) Classroom and workshop training in production of simple items with basic materials by means of infusion technique.</p>
5	<p>Vocational component – 5 days Module 1: Mould Design, Building and Preparation (5 days) Classroom and workshop training in production of simple items with basic materials and colored surface-gelcoat by means of infusion technique, done in a simple composite mould.</p>
6	<p>Vocational component – 4 days Module 1: Mould Design, Building and Preparation (4 days) Classroom and workshop training in material and process calculation and correct choice of material PGL component – 1 day Module 3: 'Personal and Professional Values' (day 1/4)</p>

7	<p>Vocational component – 5 days Module 1: Mould Design, Building and Preparation (2 days) Classroom and workshop training in using cutting and sanding tools and how to perform post processing Module 2: Repair & Finish on Composite Moulds and Simple Composite Items (3 days) Classroom and workshop training in building and repair of composite moulds.</p>
8	<p>Vocational component – 5 days Module 2: Repair & Finish on Composite Moulds and Simple Composite Items (5 days) Classroom and workshop training in assessment of moulds and how to make correct repairs.</p>
9	<p>Vocational component – 5 days Module 2: Repair & Finish on Composite Moulds and Simple Composite Items (5 days) Classroom and workshop training in assessment of moulds and how to make correct repairs.</p>
10	<p>Vocational component – 3 days Module 2: Repair & Finish on Composite Moulds and Simple Composite Items (3 days) Classroom and workshop training in mandatory first aid and mandatory firefighting. documenting results of repairs and in understanding customers requirements for repairing products with specified instructions. PGL component – 2 days Module 4: 'Entrepreneurship' (day 1/3 + day 2/3)</p>
11	<p>Vocational component – 5 days Module 2: Repair & Finish on Composite Moulds and Simple Composite Items (5 days) Classroom and workshop training in documenting results of repairs and in understanding customer requirements for repairing products with specified instructions. Workshop training in testing and analyzing of results.</p>
12	<p>Vocational component – 5 days Module 3: The Shipyard Project (5 days) This module ends the entry level training by producing a small boat. Students works as a group to train cooperation and communication, as well as showing the skills and knowledge, gained through out their entry level training This week is about deciding choice of materials, techniques and tools and planning of the practical work.</p>
13	<p>Vocational component – 4 days Module 3: The Shipyard Project (4 days) This week is about preparing moulds, applying gelcoat and prepare for the resin infusion. Students also works on the required documentation which is a customer claim. PGL component – 1 day Module 3: 'Personal and Professional Values' (day 2/4)</p>

14	<p>Vocational component – 5 days Module 3: The Shipyard Project (5 days) This week is continuous molding of the boat and the related parts.</p>
15	<p>Vocational component – 5 days Module 3: The Shipyard Project (5 days) This week is demolding the boat and the subsequent cutting to measures. Students also carry out evaluation of the result and checks for possible quality issues in relation to customer requirements and carry out the required repairs and polishing of surfaces and assembly of parts.</p>
16	<p>Vocational component – 5 days Module 3: The Shipyard Project (1 day) Students present the result of the Shipyard project to teacher for feedback and rating. Module 4: Advanced Production of Composite Moulds (4 days) Classroom and workshop training in advanced composite materials. Classroom training in rapid tooling and mould manufacturing.</p>
17	<p>Vocational component – 5 days Module 4: Advanced Production of Composite Moulds (5 days) Classroom and workshop training in building complex molds both using basic and advanced materials and techniques.</p>
18	<p>Vocational component – 4 days Module 4: Advanced Production of Composite Moulds (4 days) Classroom and workshop training in building complex molds by using sandwich constructions for better strength and stiffness PGL component – 1 day Module 5: 'The Reflective Learning Approach' (day 3/3)</p>
19	<p>Vocational component – 5 days Module 4: Advanced Production of Composite Moulds (5 days) Classroom and workshop training in the curing process and its effect on product quality Classroom and workshop training in 3D drawing and printing.</p>
20	<p>Vocational component – 5 days Module 4: Advanced Production of Composite Moulds (5 days) Classroom and workshop training in manufacturing of complex composite products in various molds and by using various techniques Classroom and workshop training in complex mould building, preparation and test production to validate the mould.</p>
21	<p>Vocational component – 3 days Module 4: Advanced Production of Composite Moulds (2 days) Classroom and workshop training in laboratory testing of materials. Module 5: Advanced Production of Composite Items/Products (1 day) Classroom and workshop training in manufacturing of complex composite products in various molds and by using various techniques. PGL component – 2 days Module 4: 'Entrepreneurship' (day 3/4 + day 4/4)</p>

22	<p>Vocational component – 5 days Module 5: Advanced Production of Composite Items/Products (5 days) Classroom and workshop training in manufacturing of complex composite products in various molds and by using various techniques.</p>
23	<p>Vocational component – 5 days Module 5: Advanced Production of Composite Items/Products (5 days) Classroom and workshop training in using polyester resins for producing composite items.</p>
24	<p>Vocational component – 3 days Module 5: Advanced Production of Composite Items/Products (5 days) Classroom and workshop training in LEAN and 5s manufacturing Classroom and workshop training in sustainability. PGL component – 2 days Module 2: 'Communication and Presentation' (day 2/4 + day 3/4)</p>
25	<p>Vocational component – 5 days Module 5: Advanced Production of Composite Items/Products (5 days) Classroom and workshop training in postprocessing and finalizing of complex composite materials.</p>
26	<p>Vocational component – 5 days Module 5: Advanced Production of Composite Items/Products (5 days) Classroom and workshop training in postprocessing and finalizing of complex composite materials.</p>
27	<p>Vocational component – 5 days Module 5: Advanced Production of Composite Items/Products (1 day) Classroom and workshop training in assembly of composite items and testing and final inspection of quality. Module 6: Repair & Finish on Complete Moulds and Simple Composite Items (4 days) Classroom and workshop training in repairing and post processing of complex moulds and items and how to fulfill customer requirements for repairing complex products with specified instructions.</p>
28	<p>Vocational component – 5 days Module 6: Repair & Finish on Complete Moulds and Simple Composite Items (5 days) Classroom and workshop training in repairing and post processing of complex moulds and items and how to fulfill customer requirements for repairing complex products with specified instructions. Workshop training in testing and analyzing of results.</p>
29	<p>Vocational component – 5 days Module 6: Repair & Finish on Complete Moulds and Simple Composite Items (5 days) Classroom and workshop training in repairing and post processing of complex moulds and items manufactured by use of advanced materials.</p>

30	<p>Vocational component – 5 days Module 6: Repair & Finish on Complete Moulds and Simple Composite Items (5 days) Continued classroom and workshop training in repairing and post processing of complex moulds and items manufactured by use of advanced materials.</p>
31	<p>Vocational component – 4 days Module 6: Repair & Finish on Complete Moulds and Simple Composite Items (4 days) Continued classroom and workshop training in repairing and post processing of complex moulds and items manufactured by use of advanced materials Classroom and workshop training in postprocessing of composite products and quality assessment of these products. PGL component – 1 day Module 3: 'Personal and professional values' (day 3/4)</p>
32	<p>Vocational component – 4 days Module 6: Repair & Finish on Complete Moulds and Simple Composite Items (2 days) Classroom training in using and understanding of supplier/customer documents in production. Module 7: Practical Skills Development: “Building a Windmill project” (2 days) This module ends the experienced level training by producing a small-scale windmill/turbine. Students works as a group to extend their ability to cooperate and communicate as professionals and thereby show understanding of these skills in modern manufacturing industry, as well as showing the skills and knowledge, gained throughout their experienced level training This week is about deciding choice of materials, techniques and tools, planning of the practical work and produce necessary drawings for the production report. PGL component – 1 day Module 3: 'Personal and professional values' (day 4/4)</p>
33	<p>Vocational component – 5 days Module 7: Practical Skills Development: “Building a Windmill project” (5 days) This week is about preparing moulds, applying gelcoat and prepare for the resin infusion. Students also works on the required documentation which is a customer claim.</p>
34	<p>Vocational component – 4 days Module 7: Practical Skills Development: “Building a Windmill project” (4 days) This week is continuous molding in the workshop for the parts for the windmill. It will be a mixture of classroom training and skills development in the workshop. PGL component – 1 day Module 2: 'Communication and Presentation' (day 4/4)</p>
35	<p>Vocational component – 5 days Module 7: Practical Skills Development: “Building a Windmill project” (5 days) This week is demolding the parts and the subsequent cutting to measures. Students also carry out evaluation of the result and checks for possible quality issues in relation to customer requirements and carry out the required repairs and polishing of surfaces and assembly of parts.</p>

36	<p>Vocational component – 5 days Module 7: Practical Skills Development: “Building a Windmill project” (3 days) Workshop training in assembling the parts for a complete windmill. Module 8: Final Test Assignment (2 days) Students will complete a final test consisting of both theoretical and practical test/exercise.</p>
37	<p>Vocational component – 5 days Module 8: Final Test Assignment (5 days) Students continue the final test/exam assignment.</p>
38	<p>Vocational component – 3 days Module 8: Final Test Assignment (3 days) Students conclude the final test/exam assignment. PGL component – 2 days Module 6: ‘Final PGL presentation’ (day 1/2 + day 2/2)</p>