

Outline For Certified Maintenance Specialist Course

<p>A. Course Overview & Curriculum</p> <ul style="list-style-type: none"> ❖ Safety & Health <ul style="list-style-type: none"> ▪ Tool Safety ▪ Chemical Safety ❖ Electrical Safety <ul style="list-style-type: none"> ▪ Hazardous Materials ▪ Suction Entrapment ▪ Layers of Protection ▪ Recreational Water Illnesses ❖ Practical Knowledge <ul style="list-style-type: none"> ▪ Customer Service <ul style="list-style-type: none"> • Company Policies – agreements and warranty coverage • Billing and collection • Customer relations skills ▪ Health and Safety for customers <ul style="list-style-type: none"> • Equipment • Drains • Electrical • Chemicals ▪ Legal considerations <ul style="list-style-type: none"> • Liability • Codes and regulations <p>B. Pool Math</p> <ul style="list-style-type: none"> ❖ Area, volume & capacity ❖ Bather load ❖ Make up water ❖ Area ❖ Chemical Dosages <p>C. Water Quality</p> <ul style="list-style-type: none"> ❖ MSDS sheets ❖ Handling & Transporting Chemicals ❖ OSHA & SARA rules ❖ pH ❖ Water Clarity ❖ Temperature ❖ Water Balance ❖ Chlorine and other Sanitizers ❖ Algicides ❖ Stain Control ❖ Water testing 	<p>D. Pool Structures</p> <ul style="list-style-type: none"> ❖ Structure types <ul style="list-style-type: none"> ▪ Concrete Pools ▪ Vinyl Liner Pools ▪ Fiberglass pools ▪ Metal Pools ▪ Spas ❖ Structure Problems <ul style="list-style-type: none"> ▪ Cracks ▪ Leaks & Leak testing ▪ Flotation ❖ Pool finishes <ul style="list-style-type: none"> ▪ Plaster ▪ Tile ▪ Coping ▪ Cantilever decks ▪ Fiberglass liner ▪ Paint <p>E. Circulation</p> <ul style="list-style-type: none"> ❖ Turnover, Flow Rate and Velocity ❖ Circulation Components <ul style="list-style-type: none"> ▪ Suction side components ▪ Discharge Side Components ▪ Filters ▪ Valves and Gages ▪ Flow meters ▪ Controllers ❖ Piping <p>F. Filtration</p> <ul style="list-style-type: none"> ❖ Types of filters <ul style="list-style-type: none"> ▪ Pressure and Vacuum Systems ▪ Filter safety ❖ Filter efficiency and performance ❖ Media types <ul style="list-style-type: none"> ▪ Sand ▪ Cartridge ▪ D.E. ❖ Filter Problems 	<p>G. Electrical</p> <ul style="list-style-type: none"> ❖ Electrical Safety ❖ Introduction to electricity ❖ Electrical Terms ❖ Electrical Testing ❖ Underwater lighting systems ❖ Heaters ❖ Heater types ❖ Sizing Heaters <ul style="list-style-type: none"> ▪ Pools ▪ Spas ❖ Gas Heaters <ul style="list-style-type: none"> ▪ Plumbing & Operation ▪ Components & Problems ❖ Electric Immersion Heaters <ul style="list-style-type: none"> ▪ Plumbing & Operation ▪ Components & Problems ❖ Heat Pumps <ul style="list-style-type: none"> ▪ Plumbing & Operation ▪ Components & Problems ❖ Solar Heaters <ul style="list-style-type: none"> ▪ Plumbing & Operation ▪ Components & Problems <p>H. Control Systems</p> <ul style="list-style-type: none"> ❖ Purpose ❖ Operations controlled ❖ Basic Troubleshooting ❖ Types of switches ❖ Electrical Controls ❖ Modern PCB's and Error Messages
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The Exam is open book. You can use the workbook and a calculator