



This course covers the following topics (any items marked with a * will be covered if time allows):

<p>Stored procedures</p> <ul style="list-style-type: none">• Creating stored procedures• Executing stored procedures• System stored procedures <p>Variables</p> <ul style="list-style-type: none">• Declaring variables• SET versus SELECT• Tricks with variables• So-called global variables <p>Parameters and return values</p> <ul style="list-style-type: none">• Passing parameters• Default values / WHERE clauses• Output parameters• Using RETURN <p>Scalar functions</p> <ul style="list-style-type: none">• What they are• Writing user-defined functions• Worked examples• Pros and cons of scalar functions <p>Testing conditions</p> <ul style="list-style-type: none">• IF / ELSE statement• Using CASE where possible <p>Looping</p> <ul style="list-style-type: none">• Syntax of WHILE• Breaking out of a loop <p>Error-handling</p> <ul style="list-style-type: none">• Using TRY / CATCH• System error functions• Custom error messages	<p>Deleting using SQL</p> <ul style="list-style-type: none">• Ways to drop tables• DELETE versus TRUNCATE <p>Updating data in SQL</p> <ul style="list-style-type: none">• The UPDATE statement• Updating using joins <p>Inserting data</p> <ul style="list-style-type: none">• Making tables (SELECT INTO)• Appending data (INSERT INTO)• Inserting individual rows <p>Creating tables</p> <ul style="list-style-type: none">• Creating tables in SQL• Primary keys and indexes• Adding relationships <p>Transactions</p> <ul style="list-style-type: none">• Beginning a transaction• Committing / rolling back <p>Temporary tables and table variables</p> <ul style="list-style-type: none">• Scope (local versus global)• Using temporary tables• Creating table variables• Pros and cons of each approach <p>Table-valued functions (*)</p> <ul style="list-style-type: none">• In-line table-valued functions• Mult-statement table-valued functions	<p>Derived tables and CTEs</p> <ul style="list-style-type: none">• Using derived tables• Common Table Expressions (CTEs)• Multiple CTEs in a single query <p>Debugging (*)</p> <ul style="list-style-type: none">• Debugging queries and procedures• Setting breakpoints <p>Dynamic SQL (*)</p> <ul style="list-style-type: none">• Building up dynamic SQL• Executing dynamic SQL• Disadvantages of dynamic SQL <p>Pivots (*)</p> <ul style="list-style-type: none">• Assembling data for pivoting• Using PIVOT• Dynamic column headers <p>Triggers (*)</p> <ul style="list-style-type: none">• Insert, update and delete triggers• Using generated tables (eg INSERTED)• Using INSTEAD OF
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Maximum 6 people per course. Scheduled classroom courses include lunch at a local restaurant; you can see how our online training works [here](https://www.wiseowl.co.uk/). For more information, see <https://www.wiseowl.co.uk/>.