

- I. hello, world
 1. Creating, compiling, and running a program
 2. Functions, statements, arguments
 1. Keywords
 2. Special characters
 3. Constants
 4. Escape sequences
 5. Comments
 3. Preprocessor
 1. #include

- II. I/O
 1. getchar/putchar
 2. EOF
 3. printf/scanf

- III. Basics of Style
 1. Consistency
 2. Names
 3. Blank lines
 4. Indentations
 5. Comments
 6. Symbolic constants #declare

- IV. Variables
 1. Declaration
 2. Restrictions on name
 1. No keywords
 2. Must consist of letters, numbers, and the _
 3. First character must be a letter
 4. Case-sensitive
 5. Only first 31 characters are significant
 3. Types
 1. char, int, float, double, void
 2. Qualifiers
 1. short, long, signed, unsigned
 4. Initial value
 5. Type conversion
 1. Implicit
 2. Explicit
 1. Type casting
 2. Functional

V. Constants

1. int 1234
2. float 123.4
3. char 'x' '\n' '\007' '\x7'
4. strings "A quick brown fox"
5. Symbolic constants

VI. Operators

1. Binary
 1. Assignment =
 2. Relational == < > <= >= !=
 1. true vs. false
 3. Arithmetic + - / * %
 1. Precedence and parenthesis
 2. Truncation
 3. Type conversion
 4. Logical && || << >>
 5. Bitwise comparison & | ^ ~
2. Unary
 1. Increment/decrement ++ --
 2. Logical not !
 3. Negative sign -
3. Ternary
 1. ?

VII. Control statements

1. Conditionals
 1. if
 2. if ... else
 3. switch
 4. Nested ifs
2. Loops
 1. while
 2. do
 3. for
 4. Nested loops

VIII. Arrays

1. One-dimensional
 1. Declaration
 1. Type
 2. Name
 3. Size
 2. Referencing an element
 1. 0-indexing
 2. Overrunning the end
2. Strings
 1. NULL character
 2. Functions
 1. strcmp
 2. strcpy
 3. strlen
3. Multi-dimensional
4. Initializing
5. Enumerations

IX. Functions

1. Declaration
2. Name
3. Arguments
4. Return value
5. Stack
6. Variable scopes

X. Pointers

1. Declaration
2. Indirection
3. Operators + ++ - --
4. Relationship to arrays
5. Multiple indirection
6. Pass by reference vs pass by value

XI. Advanced topics

1. Recursion
2. struct
3. union
4. enum
5. Advanced data types
 1. auto, extern, register, static
6. typedef