```
Example: encoding beq $1, $2, −3

From the MIPS reference sheet:
beq $s, $t, i           000100 sssss ttttt iiiiiiiiiiiiiiii

Decode the input:
op: 4   00000000000000000000000000 000100
s:  1   00000000000000000000000000 00001
t:  2   00000000000000000000000000 00010
i: −3   1111111111111111 1111111111111101

Shift into position:
op: (arithmetic−shift 4 26)   000100 00000 00000 0000000000000000
s:  (arithmetic−shift 1 21)   000000 00001 00000 0000000000000000
t:  (arithmetic−shift 2 16)   000000 00000 00010 0000000000000000
i:  (bitwise−and −3 #xffff)   000000 00000 00000 1111111111111101

Or them together:
(define word (bitwise−ior (arithmetic−shift 4 26)
                          (arithmetic−shift 1 21)
                          (arithmetic−shift 2 16)
                          (bitwise−and −3 #xffff)))
                000100 00001 00010 1111111111111101

8 bits at a time:
                00010000 00100010 11111111 11111101
(write−byte (bitwise−and (arithmetic−shift word −24) #xff)) 00000000000000000000000000 00010000
(write−byte (bitwise−and (arithmetic−shift word −16) #xff)) 00000000000000000000000000 00100010
(write−byte (bitwise−and (arithmetic−shift word −8) #xff))  00000000000000000000000000 11111111
(write−byte (bitwise−and word #xff))                        00000000000000000000000000 11111101
```