There are a few options in order to help users start developing for the GC-ESP8266EX. Here are the most common approaches:

Option 1
There is no integrated development environment (IDE) for this module. The manufacturer supplies a Linux Virtual Machine that can be accessed through the VirtualBox software. This software has the environment needed to build firmware binaries from command line, and a serial flash tool is provided for flashing the firmware via the UART of the module. Therefore, code can be developed in any IDE (i.e. Eclipse), and once it is finished, use the virtual machine to build the binaries. The zip file with instructional documentation and everything else needed for the virtual machine can be downloaded here: Click here.

Option 2
There is also a video tutorial on how to create a development environment on a Linux machine instead of using the VM the manufacturer provides: Click here.

Option 3
The hobbyist community has developed a more integrated and easy way to program in Windows. There is something called the "Unofficial Development Kit for Espressif ESP8266." It uses Eclipse and a few other tools in order to build and flash firmware right from Eclipse; it also includes many more sample projects and applications.
Here are the instructions on what to install and how to set it up the Eclipse way:
1. Download Mikhail Grigoriev's Unofficial Development Kit for Espressif ESP8266, then install it.
2. If a recent JRE or JDK is not installed, download and install it from Oracle. Version seven is the recommended minimum, but version eight will work just as well.
3. Download and install Eclipse IDE for C/C++ Developers. Download the most recent version and unpack the archive to the root of the C drive.
4. Download and install MinGW. Go to the official SourceForge webpage and get the file named, "mingw-get-setup.exe." When installing, uncheck the "…also install support for the graphical user interface" option, it will not be needed.
5. Download the scripts created by Grigoriev which allow for automated installation of additional modules within MinGW. Then, extract the file package and run "install-mingw-package.bat."
6. Go to the directory and start Eclipse (C:\eclipse\eclipse.exe). Once Eclipse has been launched, select File>Import>General>Existing Project in the workspace. After this, enter "C:\Espressif\Examples as a root directory; this will allow for the user to import sample projects.
7. Add the path "C:\Espressif\ESP8266_SDK\include\ in the Eclipse settings under "Paths and Symbols." This will allow for auto-completion in Eclipse.
Here is a video of the Unofficial Development Kit running: Click here.

Option 4

Arduino IDE has expanded support for third party boards. The GC-ESP8266EX can be programmed via Arduino IDE by installing the GC-ESP8266EX Board Manager. Here are the instructions on how to program the GC-ESP8266EX using the Arduino IDE:

1. Download the latest version of the IDE on the [Arduino website](#).
2. Start the Arduino IDE, open File>Preferences and enter the following address into the Additional Board Manager URLs field:
    "http://arduino.esp8266.com/package_esp8266com_index.json"
3. Open the Board Manager from "Tools" and install the ESP8266 platform by searching for ESP8266 by ESP8266 Community.
4. Select "Generic ESP8266 module" from Tools>Board.
5. Select the corresponding serial port of the GC-ESP8266EX from Tools>Port.
6. Put the ESP8266 in programmable mode (Ground GPIO-0).
7. Load an example program from File>Examples under "Examples from Custom Libraries.
8. Click Sketch>Upload to upload the example code.