```c
#include <stdio.h>
#include "freertos/FreeRTOS.h"
#include "freertos/task.h"
#include "esp_system.h"
#include "esp_wifi.h"
#include "esp_event.h"
#include "nvs_flash.h"
#include "esp_log.h"
#include "esp_err.h"

#define WIFI_SSID "Your_SSID"
#define WIFI_PASS "Your_PASSWORD"

static const char *TAG = "WiFi Example";

void wifi_event_handler(void *arg, esp_event_base_t event_base, int32_t event_id, void
*event_data) {
    if (event_base == WIFI_EVENT && event_id == WIFI_EVENT_STA_START) {
        esp_wifi_connect();
        ESP_LOGI(TAG, "Connecting to Wi-Fi...");
    } else if (event_base == WIFI_EVENT && event_id == WIFI_EVENT_STA_DISCONNECTED)
{
        ESP_LOGI(TAG, "Disconnected. Reconnecting...");
        esp_wifi_connect();
    } else if (event_base == IP_EVENT && event_id == IP_EVENT_STA_GOT_IP) {
        ip_event_got_ip_t *event = (ip_event_got_ip_t *) event_data;
        ESP_LOGI(TAG, "Got IP: " IPSTR, IP2STR(&event->ip_info.ip));
    }
}

void wifi_init() {
    ESP_ERROR_CHECK(nvs_flash_init());  // Initialize non-volatile storage
    ESP_ERROR_CHECK(esp_netif_init()); // Initialize network interface
    ESP_ERROR_CHECK(esp_event_loop_create_default()); // Create default event loop

    esp_netif_create_default_wifi_sta(); // Create Wi-Fi station
    wifi_init_config_t cfg = WIFI_INIT_CONFIG_DEFAULT();
    ESP_ERROR_CHECK(esp_wifi_init(&cfg));

    esp_event_handler_instance_t instance_any_id;
    esp_event_handler_instance_t instance_got_ip;

    ESP_ERROR_CHECK(esp_event_handler_instance_register(
        WIFI_EVENT, ESP_EVENT_ANY_ID, &wifi_event_handler, NULL, &instance_any_id));
```

```c
    ESP_ERROR_CHECK(esp_event_handler_instance_register(
        IP_EVENT, IP_EVENT_STA_GOT_IP, &wifi_event_handler, NULL, &instance_got_ip));

    wifi_config_t wifi_config = {
        .sta = {
            .ssid = WIFI_SSID,
            .password = WIFI_PASS,
            .threshold.authmode = WIFI_AUTH_WPA2_PSK,
        },
    };

    ESP_ERROR_CHECK(esp_wifi_set_mode(WIFI_MODE_STA)); // Set as Wi-Fi station
    ESP_ERROR_CHECK(esp_wifi_set_config(WIFI_IF_STA, &wifi_config)); // Set configuration
    ESP_ERROR_CHECK(esp_wifi_start()); // Start Wi-Fi
}

void app_main(void) {
    ESP_LOGI(TAG, "Starting Wi-Fi example...");
    wifi_init();

    while (true) {
        vTaskDelay(pdMS_TO_TICKS(1000)); // Delay 1 second
    }
}
```