Udacity Course Catalog API Documentation

The Udacity Course Catalog API is meant to make it easier for businesses, websites (e.g. online course aggregators), and individuals to programmatically access Udacity's ever-growing course catalog. The Course Catalog API makes it easy for developers to access up-to-date information about all Udacity courses and Nanodegrees (follow this link for more information about Udacity's Nanodegree program).

Please contact **public-api@udacity.com** with any questions/concerns.

PLEASE NOTE: Your use of the Udacity Course Catalog API is governed by the Udacity API Terms of Use. By using the Udacity API Documentation you agree to be bound to the full language of the most current Terms found here: Udacity API Terms of Use.

Endpoint URI

`https://www.udacity.com/public-api/v0/courses`

HTTP Method

`GET`

Query Parameters

None

Response format

The API responds with the `application/json` content-type.
A successful response from the API endpoint is a **JSON object** with the following format.
Note: if the expected value is a String and there is no content for a particular value, the value will be the empty string. Long strings (e.g. course summary or syllabus) are Markdown formatted (note that Markdown strings can include HTML tags), and all strings use Unicode encoding.

Here is an example of the response, with an explanation of the fields below:


```
{
  "courses": [
    {
      "key": "cs101",
      "title": "Intro to Computer Science",
      "homepage": "https://www.udacity.com/course/cs101",
      "subtitle": "Build a Search Engine & a Social Network",
```

```
      "level": "beginner",
      "starter": true,
      "image": "https://lh5.ggpht.com/ITepKi-2pz4Q6lrLfv6QDNViEG...",
      "banner_image": "https://lh4.ggpht.com/9L_ZBdT4T19FvJGW...",
      "teaser_video": {
        "youtube_url": "https://www.youtube.com/watch?v=Pm_WAWZNbdA"
      },
      "summary": "In this introductory course, you'll learn...",
      "short_summary": "Learn key computer science concepts in...",
      "required_knowledge": "There is no prior programming...",
      "expected_learning": "You'll learn the programming language...",
      "featured": true,
      "syllabus": "### Lesson 1: How to Get Started...",
      "faq": "### When does the course begin? This class is self...",
      "full_course_available": true,
      "expected_duration": 3,
      "expected_duration_unit": "months",
      "new_release": false,
      "tracks": ["Data Science", "Web Development", "Software Eng"],
      "affiliates": [],
      "instructors": [{"name": "Dave Evans", "bio": "Dave is ...",
                       "image": "https://lh6.ggpht.com/1x-8cXA7J..."}]
      },
      {
        "key": "cs046",
        "title": "Intro to Java Programming",
        "faq": "",
        "affiliates": [
          {"name": "San Jose State University",
           "image":"https://lh3.ggpht.com/MpxH41jmm6mn0XOaVq6d..."}
        ],
        "instructors": [
          {"name": "Cay Horstmann", "bio": "Cay grew up in North...",
           "image": "https://lh5.ggpht.com/b-pMaSLEZOPel9P2s4AIo..."}
        ],
        ...
      },
      ...
  ],
  "tracks": [
    {
      "courses": ["cs101", "ud359", "ud827", "ud201", "ud617", ...],
      "name": "Data Science",
      "description": "Learn data science from industry experts..."
    },
    ...
  ],
```

```
  "degrees": [
    {
      "key": "nd001",
      "title": "Front-End Web Developer Nanodegree",
      "homepage": "https://www.udacity.com/course/nd001",
      "subtitle": "Creating Stunning User Experiences",
      ...
    },
    ...
}
```

The response object has three keys, **`"courses"`**, **`"tracks"`**, and **`"degrees"`.**

The **`"courses"`** and **`"degrees"`** keys have values of an array with objects with the following key/value pairs:

- **key: String**
  - The unique id for the course or Nanodegree, e.g. “cs101”
- **title: String**
  - The title of the course or Nanodegree, e.g. “Intro to Computer Science”
- **homepage: String**
  - A URL to the course or Nanodegree homepage, e.g. “https://www.udacity.com/course/cs101”
  - This URL includes two query parameters, `utm_medium=referral & utm_campaign=api` - please leave them included when linking to these homepages
- **subtitle: String**
  - The subtitle for the course or Nanodegree, which explains a little more about the content, e.g. “Build a Search Engine & a Social Network”
- **level: String**
  - One of `{"", "beginner", "intermediate", "advanced"}`
  - Courses at the “beginner” level include “starter” courses (see the starter property below) as well as courses that are perfect for students taking their first steps into a subject, examples include “Intro to Computer Science” and “Programming Foundations with Python”
  - Courses at the “intermediate” level require some previous knowledge in order to take sucessfully, examples include “Intro to Data Science” and “Mobile Web Development”
  - Courses at the “advanced” level require significant prerequisites and can include Masters level courses, examples are “Artificial Intelligence for Robotics” and “Machine Learning - Supervised Learning”
- **starter: Boolean**

    - A starter course is one that is appropriate for someone who comes from a non-technical background
- **image: String**
    - URL for the image thumbnail that goes with the course or Nanodegree
- **banner_image: String**
    - URL for the big “banner” image that goes along the top of the homepage
- **teaser_video: Object with one key, `"youtube_url"`**
    - The value associated with the `"youtube_url"` key is a String containing the URL to a YouTube video describing and advertising the course
- **summary: String**
    - A summary of the course or Nanodegree and why someone would want to take it, in Markdown format
- **short_summary: String**
    - A shortened version of the summary, in Markdown format
- **required_knowledge: String**
    - A list of prerequisite knowledge for taking the course, in Markdown format
- **expected_learning: String**
    - The answer to the question “what will I learn in this course?”, in Markdown format
- **featured: Boolean**
    - Whether this course or Nanodegree is “featured” more prominently on the Udacity website
- **syllabus: String**
    - A list of lessons included in the course or Nanodegree and the material they cover, in Markdown format
- **faq: String**
    - A list of frequently asked question pertaining to the course or Nanodegree, in Markdown format
- **full_course_available: Boolean**
    - Whether the full course experience (which includes coaching support and a verified certificate) is available for this course
- **expected_duration: Number**
    - An integer that, when matched with the `expected_duration_unit` property, explains how long the course usually takes to complete, though all Udacity courses are self-paced. An `expected_duration` of `0` means that there is no estimated completion time for that course.
    - For Nanodegrees, this value is the low end of the range of estimated completion time. For example, if the `expected_duration` field has a value of 6, the estimated time range might be 6 - 12 (months)
- **expected_duration_unit: String**
    - One of `{"", "days", "weeks", months"}`
- **new_release: Boolean**
    - If the course or Nanodegree is newly released

- **tracks: Array of Strings**
    - An Array of the tracks the course belongs to
    - A track is a descriptive name given to a set of courses in the same general category. These tracks are subject to change. Some tracks are “Data Science”, “Web Development”, “Georgia Tech Masters in CS”, and “Nanodegrees”.
- **affiliates: Array of Objects**
    - The name of the affiliate(s) (companies or universities) that the course was developed in partnership with, if any. Some examples include “Google”, “Salesforce”, and “Georgia Institute of Technology”.
    - **name: String**
        - The affiliate’s name
    - **image: String**
        - A link to a logo for the affiliate
- **instructors: Array of Objects**
    - **name: String**
        - The instructor’s name
    - **bio: String**
        - The short biography for the instructors
    - **image: String**
        - A link to a photo of the instructor

The `"tracks"` key has a value of an array with objects with the following key/value pairs:

- **name: String**
    - The track’s name
- **courses: Array of Strings**
    - An array of the course keys which are included in this track
- **description: String**
    - A detailed description of the track

Example Code to Parse the API’s Response

Below is some sample Python that could be used to parse the JSON outputted by this API. The code parses the JSON and prints out a list of course names and their respective homepages.

```
import json, urllib

response = urllib.urlopen('https://www.udacity.com/public-api/v0/courses')
json_response = json.loads(response.read())
for course in json_response['courses']:
    print course['title'] + ': ' + course['homepage']
```

Caching

It is OK to cache the course catalog on your servers to prevent making many calls to this API endpoint, but you should update the information you have at least once per week in order to keep your data up-to-date and receive new courses.

Errors

If there are errors, the response will be a JSON object with the keys `"error"` and `"status"`, where the value for `"error"` is the error message and the value for `"status"` is the HTTP status code. For example:

```
{
    "status": 404,
    "error": "Path not found"
}
```

Change Log

- Jan 6, 2015: Added `degrees` top-level key
- August 12, 2014: Initial release