

# Cardiovascular Medicine

News | Published 17 December 2019 | doi:10.4414/cvm.2019.02072  
Cite this as: Cardiovasc Med. 2019;22:w02072

## The virtual university: the Massive Open Online Course on myocardial infarction reaches over 23,500 users worldwide

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### Massive Open Online Courses (MOOCs)

Studying has become an online option in the realm of the internet. MOOCs now allow individuals from around the world to study at the most prestigious universities without being on site. This allows students without means to attend courses at recognised universities and to obtain a first-class education in different areas including humanities, economics, law and medicine. One of the operating platforms is Coursera, an American online platform providing over 3600 courses. Coursera collaborates with over 190 well-known universities worldwide, among which are the Massachusetts Institute of Technology, Stanford University, Yale, Bocconi and New York Universities, and the University of Pennsylvania, as well as Google and IBM, among others. The platform provides not only lectures, but also illustrations, tables and videos where appropriate. Since its launch in 2012, the platform has had more than 40 million users, allowing people from around the world to access courses on a vast number of topics – either for free, or by paying a fee if they wish to obtain a certificate. The

courses are repeated on a regular basis so that students can complete them at their own pace.

### First medical online course of the University of Zurich attracting attention

In November 2017, the University of Zurich, in collaboration with the Education Centre of the Zurich Heart House and the Heart Centre of Zurich at the University Hospital of Zurich, with Prof. Thomas F. Lüscher as the coordinator, has successfully launched its first medical MOOC on the subject of “myocardial infarction”. After just 2 years, the course has had outstanding responses: as of 1st October 2019, 23,772 unique visitors have visited the online course with a total of 6865 learners, of whom 4490 are considered active learners (all time) and 336 course completers who have obtained a certificate.

Among all courses provided by the University of Zurich, the course on myocardial infarction has been the only one that was directly promoted and recommended online on the Coursera platform itself (fig. 1).

**Figure 1:** The University of Zurich course on myocardial infarction on the Coursera platform.

The screenshot shows the Coursera interface for the course 'Myocardial Infarction' by the University of Zurich. At the top, there is a search bar with the text 'Was möchten Sie lernen?' and a search icon. Below the search bar, there are links for 'Für Unternehmen', 'Anmelden', and a blue button for 'Kostenlose Teilnahme'. The course title 'Myocardial Infarction' is prominently displayed, along with a 4.8 star rating and '79 Bewertungen • 16 Bewertungen'. A blue button says 'Kostenlos anmelden' with 'Beginnt am Okt. 21' below it. To the right, it says 'Finanzielle Unterstützung verfügbar'. At the bottom, it states '6.825 bereits angemeldet!'. The University of Zurich logo is visible in the top right corner of the course banner.

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**Figure 2:** Age group and gender distribution of the students.



**Course structure and content**

The courses consist of 6- to 10-minute video presentations and additional material such as PowerPoint presentations, case studies, questionnaires and additional reading material. Each lecture provides material for a learning session of at least 30 minutes. The target audience differs according to the topic and level of comprehension difficulty. But in general, the courses are designed to meet the needs of a broad audience. The course on “myocardial infarction” includes a total of 23 lectures divided into 5 modules:

- Module 1: The heart and cardiovascular system
- Module 2: Risk factors and prevention of cardiovascular disease
- Module 3: Acute coronary syndrome: early management
- Module 4: Acute coronary syndrome: follow up and rehabilitation
- Module 5: Heart failure: final stage of coronary heart diseases

**Course ratings and statistics**

The course is currently rated at 4.8 out of 5 stars, with a total of 95 reviews. Here are some extracts:

“This was a wonderful course. It provided a nice overview of each and every aspect of MI and HF as well as access to enough number of literature sources to deepen one’s understanding of the subject matter” (5 June 2019).

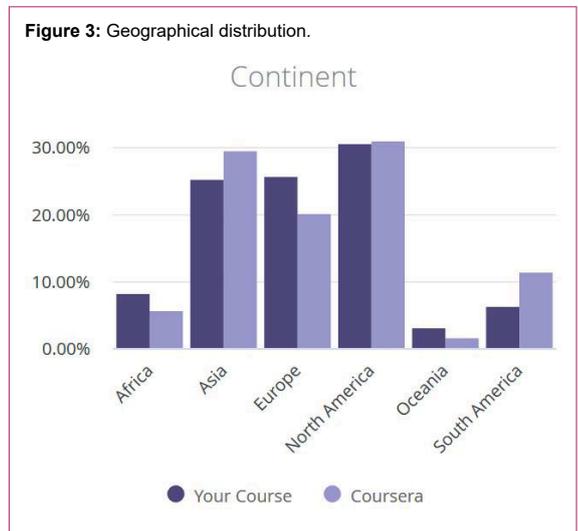
“This course was so useful, because every professor taught appropriate and current information about cardiovascular diseases (myocardial infarction and heart failure) and related these to older trials to highlight the improvements and how diseases and their management have changed over time” (30 January 2019).

“It is an excellent course, I thank Coursera, the University of Zurich and the teachers for sharing their time, their teachings and this wonderful course, I recommend it 100%. Thank you very much” (2 October 2018).

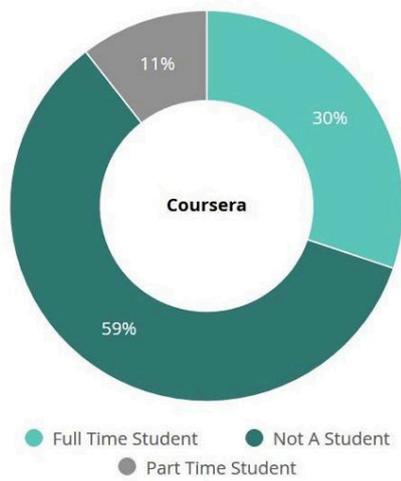
“This course gave me a deeper understanding of the heart failure and exposed my knowledge to a wider preventive measure in persons diagnosed with it. I will recommend

this course to anyone with the determination to know more about heart failure” (25 June 2018).

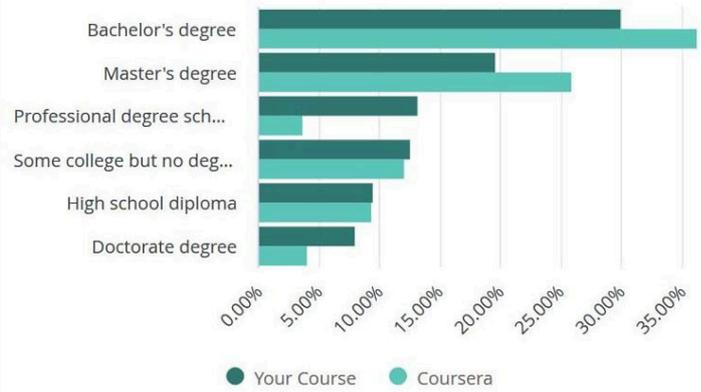
The geographical distribution of the participants reflects the global strategy of this novel educational concept (figs 2–5):



**Figure 4: Employment status.**

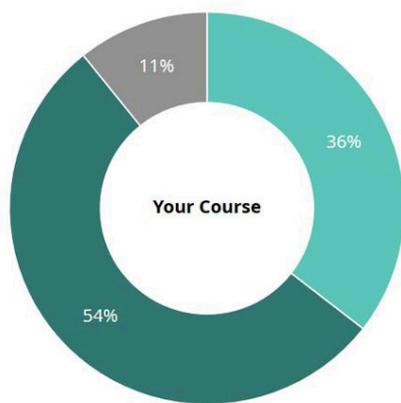


Highest Education (Top 6 Categories)



**Figure 5: Education status.**

Student Status



Employment Status (Top 6 Categories)

