DRUG DISCOVERY ONLINE
two different products for two different types of customers

Drug Discovery Online has developed a series of 15 2-week mini-courses that cover various topics key to drug discovery and development. However, we have noticed that many of our users do not complete the courses as intended and have a high degree of non-completion or attrition. We believe this is due to having too many additional assignments and activities. While these activities have been created to enhance the learning experience, some of our learners prefer to hear the lecture content through video only on audio-only delivery. Therefore, we are interested in hosting the video lectures created by Drug Discovery Online on a video portal that minimizes that extra work for the students but can still be monetized. Before exploring creating a second product type, we want to do a competitive analysis for current, complete courses to see what their user experience has to offer.

FULL (PAID) COURSES
Colleges and universities face daunting challenges to long-established business models. Many colleges and universities are responding by experimenting with changes to their business models to ensure financial sustainability. Many questions surround the use of online programs and the impact on higher education's business model, and there is a great deal of experimentation going on. Significant development has been the massive open online courses (MOOCs) movement, started by one of Stanford's most inventive professors, Sebastian Thrun, who offered his "Introduction to Artificial Intelligence" course online and free of charge a few years ago.
https://www.tiaa.org/public/pdf/higher-education-business-model.pdf

Direct Competitor Analysis:
1. Drexel Master of Science in Drug Discovery
   a. **Overview:** The Master of Science degree program in Drug Discovery & Development (DDD) offers students the opportunity to understand, evaluate and engage with the entire process of drug discovery and development.
   b. **Digital landscape:** The program has a website (https://drexel.edu/medicine/academics/graduate-school/drug-discovery-development/), and the courses are taught online. Drexel Learn is the University's fully

supported learning management system (LMS). Learn is managed by Drexel University Information Technology and is fully integrated with the DrexelOne portal and the Banner Student Information System (SIS). All course sections are created in Drexel Learn each term and are freely available for faculty to activate and use. Enrollment data is automatically fed in, making this an easy-to-use solution for faculty to engage their students. Drexel likely uses DrexelLearn for delivering its online programming. Most learning management systems offer a mobile version but are intended to be used on a computer.

c. **Feature set:** This program provides the rigorous scientific and technical training necessary to succeed in drug discovery's complex and multidisciplinary field and introduces students to a broad array of career opportunities. The program suggests that this experience facilitates a smooth transition to an enduring and productive career with a biotechnology firm, pharmaceutical company, contract research organization, a nonprofit foundation, government agency, or an academic institution.

d. **Experience:** It is unclear from the website, but it seems like Drexel might have a customized LSM that could provide a more customized learning experience. However, most LSMs offer the same features, including submitting assignments, content editor, discussion boards, grade center, and texting tools.

e. **Social media presence:** Drexel's Drug Discovery program has paid for google ads that bring it up first is a google search. I think that this works well because Google would be the first place someone who begins their investigation.

f. **Region:** Drexel is located in the eastern mid-west. It could have a decent reputation in this area as a university, but it is unlikely to hold a national reputation. This could be an area where a Vanderbilt University program could dominate the southern region and provide greater national recognition.

g. **Competitive advantage:** This program was the first to market and therefore has set itself apart from competitors.

h. **Themes from customer reviews:** Quotes from people on the website indicate that they have gotten a lot from the program and that it has impacted their careers.

i. **General notes:** The cost of the program is approximately $14,446/year with additional fees. It is unclear how many students are/have enrolled in the program.

2. Pharmaceutical Chemistry Online Graduate Program – University of Florida

a. **Overview:** The University of Florida's online pharmaceutical chemistry graduate program offers an online master's degree and graduate certificate specializing in pharmaceutical chemistry.

b. **Digital landscape:** They have a website (https://pharmchem.cop.ufl.edu/) and use Canvas as their LSM. It also seems like they are integrated with LinkedIn Learning, Voicethread, and Qualtrics. *Voicethread could be one option for the audiovisual platform need described below.*

c. **Feature set:** Their online program gives students the flexibility to continue working full time while furthering their education. A graduate degree can help students discover new career opportunities with advanced knowledge in the pharmaceutical sciences.

d. **Experience:** Canvas is a highly used LSM that offers excellent usability as compared to other LSM platforms. IT is unclear what the UF video and content

experience are like for a user. One interesting integration that they use is VoiceThread. According to the website, VoiceThread fills the social presence gap found in online learning interactions. With VoiceThread, you can comment on slides using one of five powerful commenting options: microphone, webcam, text, phone, and audio-file upload. Also, VoiceThread allows you to share with specific people or open it up to the entire world. Similar platforms could include Kaltura, Panopto, and Vimeo.

e. **Social media presence:** UF has a solid social media pretense from pushing their online courses. In particular, they seem to use Google Ads and Instagram.

f. **Region:** UF would hold a strong reputation in the southeastern area of the US.

g. **Competitive advantage:** This program is one of six programs that they offer in this area. They have the capacity and the processes in place to create online programs reasonably seamlessly.

h. **Themes from customer reviews:** Quotes from people on the website indicate that they have gotten a lot from the program and that it has impacted their careers.

i. **General notes:** Tuition is $575 per credit hour (may increase to $625 per credit hour beginning this spring) plus fees for all students, regardless of location. This tuition rate is subject to change. This program does not accept the UF EEP or Florida State Tuition Waiver. As an off-book program, it does not receive funds from these programs.

3. Drug Discovery and Development Professional Certificate – UC San Diego

a. **Overview:** This certificate is intended for individuals with educational backgrounds in chemical and biological sciences at the bachelor, masters, or Ph.D. level interested in entering or becoming more effective at working in the pharmaceutical or biotechnology industry.

b. **Digital landscape:** They offer two different types of formats. Online courses are fully online Instructor-led training on your schedule with no set meeting times. Lectures are pre-recorded, and the instructor selects weekly discussion topics to help students engage with the content and share meaningful experiences. They also offer live online courses, which are fully online instructor-led training using live virtual class meetings via the Zoom conferencing system. A list of the courses, the formats, and the cost of the course is available on their website (https://extension.ucsd.edu/courses-and-programs/drug-discovery-and-development).

c. **Feature set:** Modern drug discovery utilizes multidisciplinary project teams and attempts to simultaneously move forward with as many aspects of the overall drug discovery and development process as possible. This environment requires that scientists be intensely trained in their area of specialty and possess a broad background, vocabulary, and appreciation of the possibilities and limitations of related disciplines. UC San Diego Extension's professional certificate is designed to help meet that need.

d. **Experience:** It is difficult to tell anything about the experience from available resources.

e. **Social media presence:** I have personally not observed any social media presence from UC San Diego's DDD Professional Certificate program. There is

no indication that they use social media or any other type of program advertising approach.

    f. **Region:** UC San Diego is located on the west coast and therefore might appeal to people from that region.

    g. **Competitive advantage:** It seems to be the only program that offers each course separately instead of providing it as an entire program.

    h. **Themes from customer reviews:** There are no customer reviews available to review.

    i. **General notes:** The cost of each course is $675.

Indirect Competitor Analysis:

1. **MIT OpenCourseWare** (similar to **Open Yale Courses**)

    a. **Overview:** MIT OpenCourseWare (OCW) is a web-based publication of virtually all MIT course content. OCW is open and available to the world and is a permanent MIT activity.

    b. **Digital landscape:** Everything is housed on their website (https://ocw.mit.edu/about/).

    c. **Feature set:** According to the website, through OCW, educators improve courses and curricula, making their schools more effective; students find additional resources to help them succeed; and independent learners enrich their lives and use the content to tackle some of our world's most complex challenges, including sustainable development, climate change, and cancer eradication.

    d. **Experience:** Overall, the experience is simple, and all material is available on a single page that is directly accessible (ex. https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-0001-introduction-to-computer-science-and-programming-in-python-fall-2016/). The content includes a course home page, syllabus, reading, lecture videos, lecture slides, in-class questions, and video solutions, assignment, and a download page. While it is not the most engaging design, everything is readily available makes the page attractive. Also, these resources are attractive because they are entirely free.

    e. **Social media presence:** Because MIT is such a leader in the space, it does not seem to need a social media presence.

    f. **Region:** MIT is located on the east coast, but it has an international reputation as a leader in the computer and technology space.

    g. **Competitive advantage:** Because they were the first to market and their content is free, MIT has become a clear leader in online education.

    h. **Themes from customer reviews:** There are no customer reviews available on the website. Since this site offers free content, most of the customer feedback is likely to be content-related, which is beyond the scope of this analysis.

    i. **General notes:** This is an indirect competitor because the content is delivered for free to the customer and because there are so many courses available on the site.

2. **Coursera** (similar to **Udemy**/ **EdX** (Harvard/MIT)/ **Udacity** (MOOC))

    a. **Overview:** Coursera is the global online learning platform that offers anyone, anywhere, access to online courses and degrees from world-class universities and companies.

b. **Digital landscape:** Coursera has its website (https://www.coursera.org/) that is easy to navigate and houses all materials.

c. **Feature set:** Coursera says that it allows users to "build skills with courses, certificates, and degrees online from world-class universities and companies." Customers join for free. Students can take some courses for free, but others cost a fee to access. It is also possible to earn degrees and certificates from Coursera.

d. **Experience:** Over the platform is simple and easy to navigate. Because a user can access the content quickly, it is very appealing. Several interactive elements make this approach more appealing than just having access to the material.

e. **Social media presence:** Coursera has strong social media and Google Ads marketing strategy.

f. **Region:** Since Coursera works with multiple universities and companies, it has an international reputation.

g. **Competitive advantage:** The company offers more than 4,300 courses, more than 450 specializations, more than 440 projects, more than 30 certificates, and 20 degrees, according to its website. Coursera is a one-stop-shop for all online learning needs. Notably, since partnering with Google, it offers a wide range of courses and degrees that are in demand with target large audiences.

h. **Themes from customer reviews:** Coursera has a D- grade from the Better Business Bureau, which cited the company's failure to respond to several complaints as the reason for the rating. Based on customer reviews, Coursera received an overall Trustpilot rating of 2 stars out of 5.

i. **General notes:** Because Coursera offers a wider variety of content appeals to a broader audience, it is an indirect competitor. Users can access materials for more than 1,600 free Coursera courses and opt to pay for certificates upon completion. Many courses also can be audited for free, but auditors may not be able to submit some assignments or receive grades for their work. Prices for courses with certificates start at about $49. Coursera users can apply for financial aid if they need help paying for certificates.

3. eCornell

   a. **Overview:** eCornell has over 120 online certificate programs. Expand your professional skill set. Explore courses and certificates from top faculty at Cornell.

   b. **Digital landscape:** eCornell has its website and is distinct but connected to the University (https://ecornell.cornell.edu/). eCornell, Cornell University's external education unit, provides online professional and executive development to students worldwide. We offer 100+ award-winning professional certificate programs in a wide variety of disciplines:

   c. **Feature set:** eCornell courses are developed by Cornell University faculty and often include practical insights from other industry experts. All eCornell course content comes from top-rated programs with proven curricula. eCornell courses are online and expert-led with structured flexibility. Courses are facilitated by subject-matter experts who guide you, challenge you, and help you apply the course concepts to your real-world, on-the-job circumstances. Courses are designed to accommodate the schedules of busy professionals, so they are available around the clock and completely asynchronous. This means that once you begin your course, there is no appointed time or day that you must be online.

You determine the schedule that's right for you. eCornell courses have defined start dates and end dates. A critical part of self-directed learning is to have a finish line. Most eCornell courses take about six to eight hours to complete over two weeks. About 90% of students finish their courses, a completion rate that leads the industry.

d. **Experience:** It is difficult to tell what the learning experience is like based on the website.

e. **Social media presence:** eCornell seems not to have a solid social media presence.

f. **Region:** Cornell is located in the northeast.

g. **Competitive advantage:** Cornell is an ivy league school that likely improves its reputation among its competitors.

h. **Themes from customer reviews:** There are no customer reviews that offer insight on the website.

i. **General notes:** eCornell offers a wide range of course topics which makes it an indirect competitor for this analysis.