



OLC Accelerate

*ACCELERATING ONLINE LEARNING **WORLDWIDE***



ONLINE LEARNING™
CONSORTIUM

#OLCACCELERATE • NOVEMBER 16-18, 2016

WALT DISNEY WORLD SWAN & DOLPHIN RESORT • ORLANDO, FL

But in My Class, I Write on the Board:

Introducing New Online Faculty to the Tools of the Trade

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#NYUOnline



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Reflection Questions:

How do you use innovative technology in online courses at your home institution?

What current tools do you use in your online courses? And how have the tools you use changed over time?



At the end of this presentation participants will be able to:

- Discover- different approaches to using frequently used software as effective tools in the online course building process.
- Select online tools that fit the needs of the learning objectives.
- Apply the selected tool into the course.



About us and our courses

Bioinformatics, MS

Computer Engineering, MS

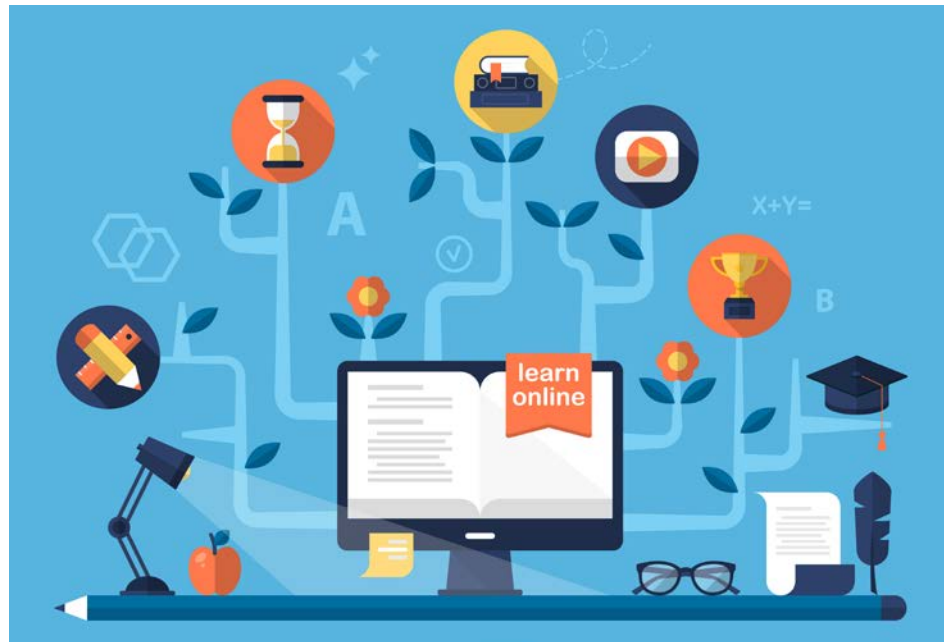
Cybersecurity, MS

Electrical Engineering, MS

Industrial Engineering, MS

Management of

Technology, MS





NYU Tandon Online's Approach

NYU Tandon Online's guidelines for converting on-campus classes to online classes and how we incorporate different tools and technologies in this process





What is the structure of NYU Tandon Online courses?

- Courses are fully online and asynchronous
- Content is chunked into weekly units, “Active Learning Modules”
- Courses live within our LMS, NYU Classes (Sakai)
- Courses also include discussion boards, chat rooms, live webinars, etc



What is the structure of NYU Tandon Online modules?

Assume each module (on average) is 60 minutes of lecture + 15 minutes of quizzing. Discussion boards and the webinar session comprise the remaining parts of the course.

Each module will include, at least:

- Text slides with animation or interactive elements with high quality video or voice over
- Screen capture of your desktop, if needed
- Interactive, low-stakes quizzing or assignments

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NYUClasses

My Workspace ▾

Creative Coding, Sect ... ▾

Training Systems in O ... ▾

CS Bridge Prog - Summ ... ▾

COMP ... ▾

UPDATED: Urgent Course Survey

Home

Announcements

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Gradebook

NYU Libraries

Statistics

Settings

WebEx

Week 1

Week 2

Week 3


Week 4

UPDATED: Urgent Course Survey

Add Content ▾

More Tools ▾

Edit

 **NYU TANDON
ONLINE**

Dear Student,

We hope you are enjoying your online course at NYU Tandon School of Engineering! To ensure the quality of our **Learning Student Evaluation**, the information you provide will directly impact and improve your learning experience.

This survey will only take **10-15 minutes** of your time. The following link will allow you to take the **course**.

[Go to Survey](#)

Deadline: August 25th, 2016

We thank you for your time and look forward to reading your valuable feedback.

Regards,

John Vivolo
Director of Online and Virtual Learning
NYU Tandon Online

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online.engineering.nyu.edu

NYU Classes

- Announcements
 - Forums
 - WebEx
- Lessons (Scorm Modules)
 - Resources
 - Chat
- Assignments
- Gradebook



Active Learning Modules

- Video
- Text/ Images
- Interactive Features
- Quizzing

Creative Coding - Week 11 (DRAFT)

Menu | Transcript

Ben Fry's 7 Stages of visualizing data

1. Acquire

2. Parse

3. Filter

4. Mine

5. Represent

6. Refine

7. Interact

Obtain the data, whether from a file on a disk or a source over a network.

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Algorithms and Data Structures for Bioinformatics - Lecture 8 (DRAFT)


Menu

Knowledge Check

A string A is an anagram of another string B, if both strings have the same characters, but in different order: For instance, "mad hubris" is an anagram of "bud mishra." Given a list of n strings all of lengths d (over a constant alphabet) we can check if the list has a pair of anagrams using time

- ☐ $O(n)$
- ☐ $O(n^2)$
- ☐ $O(nd)$
- ☐ More than $O(n^2d)$

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SUBMIT



NYU Tandon Online's Process

- Development Meeting
- Tools and Technology Overview
- Storyboarding
- Module Creation
- Teaching the Course





Schedule Development Meeting

The Meeting Agenda Includes:

Key Roles: ID, ET, Instructor, Course Developers, and all stakeholders.

Analysis: Discussion of learner needs and objectives.

Timeline: Clear deadlines for each phases and submission dates for each stakeholder.

Introduction to Technologies: Project management tools, production room, screen capturing softwares etc.

Templates: Syllabus templates, storyboards, and powerpoints.



What options do I have for my online course?

During the Development Meeting we:

- **Discuss in detail how faculty members teach their on-campus courses and provide suggestions of tools and technologies to be used in their online classes.**
- **Set up an appointment for an in-class observation of teaching styles and develop an action plan on how we will implement this in an online forum.**

Examples:

- Writing tablets
- Web conferencing
- Video filmed in front of a green screen
- Interactive elements embedded on slides



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- Web conferencing
- Google Apps
- Powerpoint
- VoiceThread
- Webcam



Tools/ Technology Used Inside of the Online Classroom



ProctorU
*Real People.
Real Proctoring.*





**Why use technology
in your online
course?**

Students Expect More!

Expectations of Next Generation Learners:

- **Mobile-Friendly**
- **Clear Designs**
- **Interactive and Engaging**
- **Ease of Communication**





Question:

In your opinion, which is one of the most important feature of a learning technology?

- Communication
 - Connectivity
 - Scheduling
- Document Sharing

SURVEY LINK:

<http://bit.do/OLCNYU>



Question:

In your opinion, which is one of the most important feature of a learning technology?

- Communication
 - Connectivity
 - Scheduling
- Document Sharing

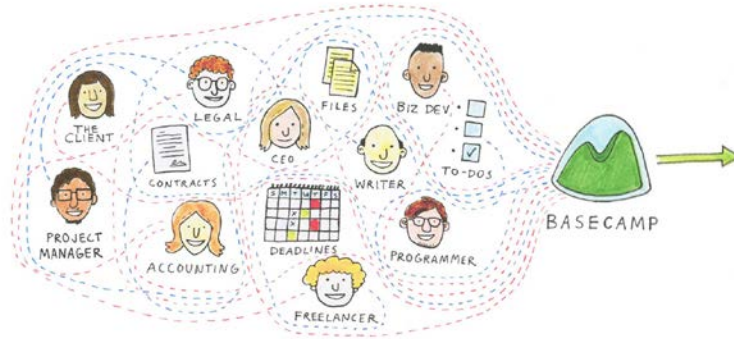
Answer:

All of the Above



Basecamp:

- Project Management Tool
- Communications
- Scheduling
- Connectivity
- Document Sharing



Chaos, Organized

Basecamp helps you wrangle people with different roles, responsibilities, and objectives toward a common goal: **Finishing a project together.**





It's great that all these tools exist,
but how do I use them in my
class?

I've never done a screen capture,
video conference, led an online
discussion forum, etc before.

I've never been filmed in
front of a green screen
before.

I don't know how to
use Powerpoint,
Camtasia, etc.

Training is key!

Educational Technologists
provide training in how to use
different technologies and what
to expect when recording in our
green screen studio



Storyboarding the Course

Scene #, Slide #	On-Screen	Audio	Programming Notes
	<i>[Media description or file reference and screen topics/text]</i>	<i>[Voiceover text or file reference]</i>	<i>[Interactivity, branching, or other notes]</i>

LECTURE # 1History

ORIGIN. Muhammed ibn-Mūsa
al-Khwarizmi al-Qutrubullī

↳ Algorithm

A prominent figure in the courts

Caliph al-Mamun
of the Abassid dynasty in Bagh.
813 ~ 833 A.D.

Al-Khwarizmi's contributions

- ◊ Popularization of Hindu numerals, decimal representation, computation with symbols, &
- ◊ A tome "al-Jabr wal-Muqabala"

↳ Algebra

Translated into Latin by the
Englishman Robert of Chester
"Dicit Algoritmi".

W An ALGORITHM is a self-contained step-by-step set of operations to be performed.

Algorithms exist that perform calculation, decision optimization, manipulation (e.g., of strings), inference (from data), model checking, reasoning,

Module Topics	Topic	Format
1	Motivation	<ul style="list-style-type: none"> Slides 1-8
2	One way if statements	<ul style="list-style-type: none"> Syntax and semantics (slide 8-9) Computing the absolute value <ul style="list-style-type: none"> Intro (slide 10) Implementation using computer Extended version (slides 12-13)
3	Two way if statements	<ul style="list-style-type: none"> Motivation – introducing the parity problem (slides 14-19) Syntax and semantics (slide 20-21) Determining the parity <ul style="list-style-type: none"> Intro (slide 22) Implementation using computer Sequence of if vs. if-else (slides 23-24) Boolean interpretation of arithmetic expression (slide 25)
4	Multi way if statements	<ul style="list-style-type: none"> Motivation – introducing the letter grade problem and solution using two way if statements (slides 26-38) Syntax and semantics (slide 39) Solving letter grade problem using multi if statement (slides 40-41)

Before Examples



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The Solar System

Systems

NERVOUS SYSTEM

Viable Systems Model - Subsystems

The metasystem is composed of systems 2,3,4, & 5.

System 5 sets policy

System 4 studies the environment

System 3 coordinates operating units

System 2 monitors specific relationships between operating units

System 1 operating units get things done

Every system 1 operating unit has its own metasystem

Center for Systems Innovation [c4si]

Ecological Systems Theory

MID-LATITUDE WEATHER SYSTEMS

Nonlinear Optical and Atomic Systems

Economic Systems

CYBERNETICS

Family Systems Theory: Assumptions

3. A family system is part of a larger system of community and society.

Knowledge systems A system of narratives

MODULE 10/Weeks 12-13: Futures Last Weeks of Course		
A) B)	Topic(s)	Format
Module Section 5		
1a	Context	Slides 1-5. Video # 1. "1920's – What The Future Will Look Like"
2a	Futurology	Slides 6-10. (1) Tarot Card Reading
3a	Scenarios	Slides 11-15.
4a	Science Fiction	Video # 2. PBS: "When Science Fiction Becomes Science Fact" Slides 16-22.
5a	Quiz	Slides 23-24.
1b	Week 13: Class chosen Case Study	Slide 25.
2b	Week 14: Presentations	Slide 26.
3b	Week 15: All assignments Due	Slides 27.
4b	Final Thoughts	Slides 28-29. Video # 3. Colbert Report "Happy Endings" video
5b	Conclusion of video.	Slide 30. Virtual goodbye and reminders.

Elements

- (1) Section 2a, "Tarot Card Reading"
App to read Tarot Cards and predict the future.

Videos

#1, Section 1a, "1920s – What the Future Will look Like"
<https://www.youtube.com/watch?v=czr-98yo6RU>

#2, Section 4a, PBS: "When Science Fiction Becomes Science Fact"
<https://www.youtube.com/watch?v=Ea4Prg9G8w>

#3, Section 4b Colbert Report "The Word: Happy Endings"
<http://www.cc.com/video-clips/fk34r7/the-colbert-report-the-word---happy-endings>



Module Creation

- Filming in our green-screen studio
- Screen captures & writing tablets
- Creating animations/interactions in Articulate Storyline





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Prior to Recording

- Faculty meet with Educational Technologists

During Recording

- Faculty record their lectures in the green screen studio
- Teleprompter
- Powerpoint Display





Supplemental Recording

- **Screen Captures**
 - Camtasia
 - Audio voiceovers
- **Writing Tablets**
 - Ipad Pro and Apple Pencil
 - Wacom Tablet





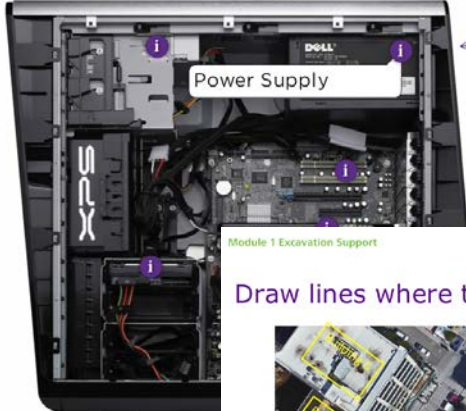
Creation of Animations/ Interactive Elements

- Referring back to storyboards, Instructional Designers create interactive features to go along with the recorded videos and combine all content into “Active Learning Modules”

Bridge to Computer Science - Module 1
Menu

Inside a computer


Click to explore



Source: <http://www.blogcdn.com/www.engage>

Module 1 Excavation Support

Draw lines where to draw your cross-sections



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Next

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Creative Coding - Week 7

Menu | Transcript

Code Walkthrough: Repetitive Motion

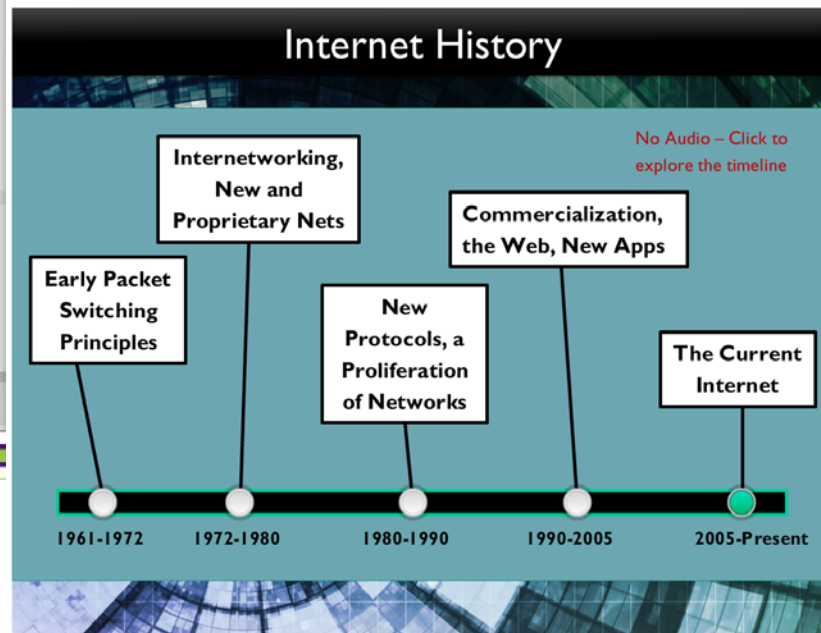
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```
1 var x = 0;
2 function setup() {
3   createCanvas(windowWidth, windowHeight);
4 }
5 function draw() {
6   background(220);
7   translate(0, height/4);
8   noStroke();
9   fill(255, 0, 0);
10  rect(x, 0, 200, 200);
11  x++;
12 }
13 }
```



Computer Networking Module 2

Resources



More Examples



Stop and Think

Imagine you are an instructor new to online learning. You have just completed developing your online modules and are preparing to teaching online for the first time.

- **What are the tools that you need or would like from your home institution?**
 - **What training would you want to receive?**





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**Example of
technology**



Faculty Feedback

“One aspect I found challenging about the online course development was the code walkthrough videos. For a technical class like Creative Coding, it was imperative to have cookbook-style code walkthroughs. Unfortunately the process of recording each video was at first unnecessarily laborious because of poor sound quality issues which required multiple retakes. In the future, I think it would be helpful if there were a self service station or a little more support in regards to any screen capture methods.” - Kevin Siwoff, Adjunct Professor, New York University

“My only proposed enhancement I would love to see—if that some of the material be projected on the green screen at the time of taping so that some of the lecture can be interactive with a background—but that might be beyond the “scope” of the template.” - Rachael Stark, Adjunct Professor, New York University



Resource Links

[Distance Learning: Best Apps, Tools and Online Services](#)

[The Next-Big-Thing in Online Education...Learning in Real Time](#)

[5 Pillars Of Online Teaching And 40 Smart Apps And Tools To Make Your Life Easier As An Online Educator](#)

[Virtual Reality and Learning: The Newest Landscape for Higher Education](#)

[Tech for Teachers: Apps, Tools and Online Resources](#)

[Kathy Shrock's Guide to Everything - Online Tools](#)





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Q & A





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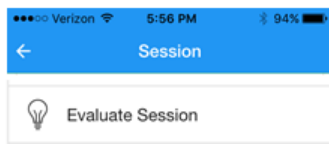


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Session Evaluations Contest



- **Download and open OLC Conferences mobile app**
- **Navigate to specific session to evaluate**
- **Click “Evaluate Session” at the bottom of session details screen**
- **Complete session evaluation***

Each session evaluation completed (limited to one per session) = one contest entry

Five (5) \$25 gift cards will be awarded to five (5) individuals

Must submit evals using the OLC Conferences mobile app or website

(As part of our "green" initiatives, OLC is no longer using paper forms for session evaluations.)

**Contact information required for contest entry but will not be shared with the presenters.
Winners will be contacted post-conference.*



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