

# Course Management

*From Proposal to Publication*

## Introduction

Traditionally, a college or university's ability to efficiently manage the introduction of new course curriculum or changes to existing courses is hampered by a variety of cumbersome legacy processes. Based on Decision Academic's extensive experience in working with higher education institutions, this document outlines the typical processes that a college or university would employ to develop and publish course curriculum. We highlight the shortcomings of these processes and offer insight into what an ideal, integrated curriculum and catalog solution should offer. Finally, we examine how Decision Academic's Navigator Suite, a suite of software services targeting the needs of higher education institutions, addresses the shortcomings of these legacy processes.

## Understanding the Processes

### Course Curriculum Management

First, let us examine the progression of a course through the curriculum management process. Usually, a committee or administrator is designated to ensure that the course amendments make its way through the process. Whether this process is manual, electronic or some hybrid of the two, a course will typically follow the sequence of stages described below.

#### Curriculum



*Define:* A faculty member sees the need to introduce new curriculum and initiates a proposal for adding a new course or amending an existing course. The faculty member will submit the addition or amendment to the curriculum management process in the form of some type of change request.

*Compare Versions:* In the case of amendments to an existing course, after a change request has entered the process, groups and individuals will compare proposed changes to existing course versions.

*Revise and Edit:* Curriculum review boards will evaluate proposed curriculum changes through a series of reviews and edits. This often involves many back and forth dialogs or group discussions either through committee meetings or e-mail exchanges. Control of the change request often changes hands several times as the process calls for multiple levels of revision by various stakeholders.

*Approve:* A governing body will give the reviewed change request final approval, after which the new course curriculum becomes official.

*Update Institutional Systems:* Most often, it's the registrar's office that receives approved curriculum changes, interprets their impact on a number of institutional systems or processes, and then deploys that information.

## Course Catalog Management

One process that is impacted by an approved change to curriculum is the catalog management process. Now it's time to include the course in catalog publications in order to relay the information to end consumers, especially students. Catalog process stakeholders are concerned more about clear communication than the academic content of the new course information. Because of its differing focus compared to the curriculum management process, the two processes are often implemented as disjointed "silo" systems.

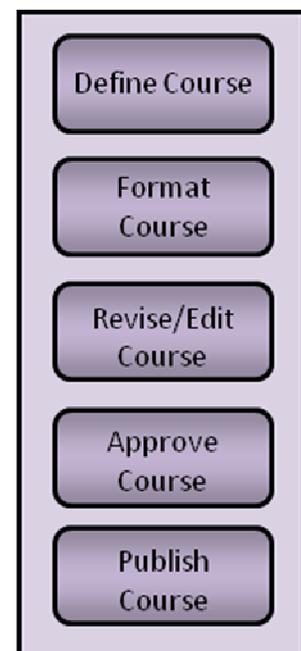
*Define:* A member of the registrar's office, or some other catalog coordinator responsible for the catalog, is the "bridge" between the two "silo" systems. This person must be able to receive notice that there has been a change to a course or a new course has been added to the curriculum. They must then enter the course into the catalog management process at the appropriate time while maintaining the integrity of the course's key academic attributes.

*Format:* Editors may extend or modify the course's information with contextual and marketing content, as well as formatting. Editors may format for several different outputs, such as print, HTML or XML.

*Revise and Edit:* Editors and/or other roles may revise proposed catalog changes through an iterative series of reviews and edits. Again, these will often involve many back and forth dialogs and group discussions through meetings or e-mail exchanges. Also, it typically involves stakeholders from the curriculum management process, such as department personnel, to ensure editorial changes have not altered the semantics of the approved curriculum changes. Control of the course information will change hands several times as it moves through multiple levels of revision by various stakeholders.

*Approve:* The revise and edit step has been completed and the course's changes are approved. The approved course returns to the hands of the catalog coordinator to prepare from publishing. At this point the institution has made its best efforts to maintain the accuracy of the course's academic information raised during the curriculum management process.

### Catalog





*Publish:* The course's approved catalog content is distributed among several publishing resources for formatting. For example, the course content is sent to IT who is responsible for creating the web-based publication, or the publications department who will format the course information for traditional printed catalog.

## **Problems with Disparate Supporting Systems**

Once an institution has defined course curriculum and catalog processes that meet its needs, it is the implementation and support of the selected systems that determine process efficiency and the accuracy of process outcome. These systems are seen to be manual, technology based or some hybrid of both. Typically both processes are supported by two disjointed systems with manual or non-automated steps bridging the two. Additionally, the overall effort required to sustain the approved course information through these processes is directly attributed to how well each individual system mitigates against redundancy, miscommunication, and the loss of control over and the accuracy of the course's key academic information.

### **Redundancy**

By supporting the curriculum and catalog management processes with two distinct systems the effort is weighed down by redundant tasks. For example, the step of "defining" the course involves non-automated or manual data entry into both curriculum and catalog systems. Other common steps such as the "revise and edit" cycle or the "approval" phase are implemented separately, with redundant supporting technologies. There is also the issue of redundant data, where the course's definition is stored in two separate systems as opposed to one centralized location.

### **Miscommunication**

In manual or hybrid systems, participants are relied upon to move the course through the process. Stakeholders are often unaware of the progress of a change request or when their input is required. They often are unaware that they may be the bottleneck in the process and a course can get lost in the shuffle. This is most apparent when an approved course change does not make it from one supporting system to the other.

### **Control**

Manual tasks in these systems provide very limited visibility into the progress of a course through both systems, potentially limiting the responsiveness and accountability of the process participants. Process administrators cannot easily follow the course's progress through a series of reviews or determine where or if the process has stalled. Linking edits or comments to participants, or comparing different versions of the course is difficult. An administrator has limited control over who is participating in either process, when they participate, and who has access to which data. Some data may be intended for specific stakeholders, either for privacy, efficiency or process reasons. While there may be well-defined



governance, tools to enforce adherence are lacking or disconnected from the course content. Publishing content usually involves many decentralized resources, and often surrenders the stakeholder's control of course content. Catalog administrators and other course content stakeholders are dependent on other external resources, such as editors, designers, printers, and IT departments, in order to arrive at a final end-consumer product in multiple media formats. Control over specific aspects of course curriculum is extremely important but the system must still be able to support collaboration to improve turn-around times and reduce the level of dependence on external resources.

### **Accuracy**

Lack of controls may result in inconsistent curriculum changes. For example, changes made in an attempt to clarify a course description in the catalog process may result in an inaccurate description. The institutional catalog is the contract with its students. Course information inaccuracies can lead to a number of challenging situations for the institution including challenges from students, accreditation agencies and other legislative bodies.

### **The Single Centralized System**

Now that the processes have been detailed and the problems of supporting these processes with distinct curriculum and catalog management systems have been highlighted, what would the ideal solution look like?

A centralized system bridges the gap separating the curriculum and catalog processes. Course data in the catalog will directly incorporate data from the curriculum process to eliminate duplication of tasks, help ensure consistency throughout these stages of a course's lifecycle, and promote a common methodology during the definition, revision, edit and approval steps. By having course data flow electronically through an integrated curriculum and catalog management system, catalog-related course data can be easily tied back to a specific version of the official curriculum definition.

### **Access Control**

An integrated solution must allow administrators to control who sees what information, and determine what type of actions a participant can perform. The system safeguards key academic attributes of the course that evolve during the curriculum process, and ensures they are maintained accurately during the catalog creation process.

### **Workflow Efficiency**

Implementing a controlled approval chain with appropriate technological support will allow the course to move through both the curriculum and catalog "revise and edit" steps via a defined queue of stakeholders. This ensures that the right participants are acting on the appropriate course information at any given time. As the course travels through the workflow, an audit trail is kept to provide administrators and other stakeholders' visibility to the evolution of the change request. Additionally a



system must provide prompting and queuing of participants in order to promote and improve the turn-around time of the approval chain process while reducing its dependence on a coordinating resource.

### **Single Extensible Data Repository**

Curriculum information must be located in a single repository to ensure consistency between processes, eliminate redundancy, and ensure changes are reflected in both processes. Additionally, the data model must be able to evolve in order to meet the ever changing needs of the institution. For example, if the institution needs to track a new piece of critical data about a course, the system should be able to support that data model change without major impact to the existing data or the availability of the system.

### **Integrated Publishing**

Availability of the course's information to the end consumer, namely students, in a timely manner and in convenient formats and media is a must for modern day institutions. With competition for, retention and graduation of students being key institutional goals, availability of the most up-to-date information about academic offerings is crucial, whether by paper, electronic copy, or web pages.

### **Integration with Other Systems**

The ideal solution will fit seamlessly with the institution's existing critical operational systems, such as authentication systems or student information systems.

### **Summary**

The higher education institution's ability to efficiently manage the lifecycle of a course is governed by the processes that it chooses to follow, and the information technologies selected to support that process. "Silo" processes, or processes with inadequate technology support, can lead to many problems, including inaccuracy, inefficiency, miscommunication and lack of transparency and accountability.

The information presented here is really the tip of the curriculum management iceberg. The need to manage curriculum at course and program levels is pervasive across an institution. Curriculum content feeds into many systems across the institution, and therefore provides many opportunities for improvement in the systems that support these processes.

Decision Academic is in a truly unique position to be able to offer an integrated software suite that facilitates the life cycle of an institution's course and program information. Navigator Suite is a web-based solution that allows an institution to easily deploy course and program lifecycle management capabilities across the institution in a number of ways.



## About Decision Academic

Decision Academic's Navigator Suite™ of curriculum management and academic advising applications helps leading higher education institutions and state systems attract more students and streamline their paths to graduation. The modular Navigator Suite™ improves curriculum management and equips users with self-service decision-making tools to easily explore the most complex transfer and degree options. More information about Decision Academic is available at [www.decisionacademic.com](http://www.decisionacademic.com)

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