

**Brandeis University** 



# Balancing Project Management Hard Skills and Soft Skills

MASTER OF SCIENCE IN MANAGEMENT OF PROJECTS AND PROGRAMS

Rabb School of Continuing Studies Division of Graduate Professional Studies Brandeis University

By Anne Marando February 2012

projectmgmt.brandeis.edu

#### TABLE OF CONTENTS

Abstract	
About the Author	
Defining Soft Skills and Hard Skills	2
Comparing Soft Skills and Hard Skills	3
Top Ten Reasons Why Projects Fail	4-6
Constant Crossovers	7-9
Threads	10-11
Balancing Techniques	12-13
Sources of Conflict	14
Conflict Handling Modes	15
Brandeis University's Master of Science in	
Management of Projects and Programs	16
MSMPP Learning Outcomes	17
Required Courses	18
Elective Courses	19-20
Defining Features	21
Top-Ten Revisited	22-23
Learning Hard Skills and Soft Skills Online	24-25
Summary	25



# Abstract

The ability to effectively manage projects and programs has become an increasingly important skill. However, many project managers are not able to successfully lead projects due to a deficiency of the necessary management skills.

Commonly referred to as "soft skills", interpersonal skills include leadership, communication, negotiation, expectations management, influencing, problem-solving, and decision-making. Soft skills are largely intangible, not associated with a deliverable or a concrete output, and are generally employed without the use of tools or templates.



"Hard skills", that is, the more technical aspects of the project manager's role, generally involve the creation of a tangible deliverable such as a work breakdown structure, project schedule, critical path diagram, earned value reports, project budgets, dashboards, and so forth. These skills are more technical in nature, and they often incorporate the use of

tools such as scheduling software, spreadsheets, modeling tools, and a myriad of deliverable templates available.

This paper explores the fundamental assumption that to be most effective, project managers need to balance hard skills and soft skills. The curriculum of the Master of Science in Management of Projects and Programs (MSMPP) program at Brandeis University's Division of Graduate Professional Studies has been designed to reflect this balance.



#### ABOUT THE AUTHOR

Anne Marando, MS, is the Academic Program Chair of Management of Projects and Programs at Brandeis University, Division of Graduate Professional Studies (GPS). She also is a faculty member, and she serves as Director of Distance Learning for GPS. She has been teaching at Brandeis GPS since its inception in 1997. She has held project and process management positions at several organizations and has led virtual and co-located teams. Her specialty areas include project and program management, risk management, distance education, and methodology management.

# Defining Soft Skills and Hard Skills

Soft Skills	Hard Skills
Relate to interpersonal skills and their challenges	Often involve the creation of a tangible deliverable Leadership is more important
More intangible and less visible	More technical in nature
Typically employed without the use of tools/templates	Often incorporate the use of a tool (scheduling software; spreadsheets; presentations) or deliverable templates

Commonly referred to as "**soft skills**," interpersonal skills include traits such as leadership, communication, negotiation, expectations management, influencing, problem-solving, and decision-making. Soft skills are largely intangible, not associated with a deliverable or a concrete output, and they are generally employed without the use of tools or templates.

"Hard skills" on the other hand, that is, the more technical aspects of the project manager's role, generally involve the creation of a tangible deliverable such as a work breakdown structure (WBS), project schedule, critical path diagram, earned value reports, project budgets, dashboards, and so forth. These skills are more technical in nature, and they often incorporate the use of tools such as project scheduling software, spreadsheets, modeling tools, and a myriad of deliverable templates available.

Many people feel more comfortable in one of these areas or the other. Some people by their nature are effective communicators and leaders; they may be less adept at creating dependency diagrams or in-depth budget tracking reports. Others may thrive in the creation of project management deliverables such as schedules, risk management reports, critical path analysis, and variance analysis, but they may lack the abilities to effectively lead resources on their teams, or to appropriately tailor and communicate project management deliverables and status to the appropriate audiences.

Pause for a moment and perform a quick self-assessment. Are you equally comfortable delivering a 15-minute presentation to a senior VP within your organization as you are with using tools to determine budget variances and corrections required? Are you equally adept at negotiating with contracted vendors as you are with developing effort and cost estimates for resources? Is there a distinction between art and science being made here?

# **Comparing Soft Skills and Hard Skills**



Soft skills are often phrased using **verbs**. They reflect actions: managing expectations, influencing, negotiating, problem-solving, and so forth. Hard skills generally are phrased using **nouns**, as they are aligned with the resulting deliverables or outputs produced: schedules, budgets, earned value metrics, risk management reports, variance analysis, etc.

The verbs and nouns listed here are by no means exhaustive, nor are they mutually exclusive. Nonetheless embedded in this discussion is a fundamental assumption that to be effective project managers, we need both soft skills and hard skills, and research supports this assumption.

### **Top Ten Reasons Why Projects Fail**

Studies by the Standish Group, Gartner, and others all point out the same fact: projects very often fail. They are late, over-budget, and/or they fail to deliver the product they were designed to produce.

Knowing what can go wrong is helpful to preventing future mistakes. If we look at common causes of project failure and assess the degree to which we are equipped to overcome them, we can avoid pitfalls when they appear. On a similar note, to be successful we need to define the measures for success, such as satisfying the requirements of stakeholders, delivering business value, and meeting time and budget expectations, and then make sure that we implement practices to be successful while avoiding common pitfalls.

Soft Skills Barometer	Reason for Project Failure	Hard Skills Barometer
	1. Inadequately trained or inexperienced project managers	
	2. Failure to set and manage expectations	
	3. Poor leadership at any and all levels	
	4. Failure to adequately identify, document, and track requirements	
	5. Poor plans and planning processes	
	6. Poor effort estimation	
	7. Cultural and ethical misalignment	
	8. Misalignment between project team and business/organization it serves	
	9. Inadequate or misused methods	
	10. Inadequate communication, incl. progress tracking and reporting	

Shown above is a list of top ten reasons for project failure, assimilated from research published by the Standish Group<sup>1</sup> and gantthead.com contributors<sup>2</sup>. Along the left and the right sides of this list, we have two barometers with a rough estimate of the degree to which soft skills or hard skills contribute to each failure factor. The barometer levels are not intended to be exact by any means, and they are based on the author's subjective classifications. Nonetheless some themes emerge.

http://www.standishgroup.com/sample\_research/chaos\_1994\_1.php

<sup>&</sup>lt;sup>2</sup> Frank Winters, (2003), Gantthead: The Top Ten Reasons Projects Fail (Part 7),

Accessed: http://www.gantthead.com/article/1,1380,187449,00.html.

"Inadequately trained or inexperienced project managers" appears at the top as the primary reason for project failure. If you asked 100 project managers if they felt they had sufficient training or experience in project management, in all likelihood the majority would say yes, but yet this perception runs counter to these studies. For this failure factor, the hard and soft skills barometers are about even; to be successful, project and program managers need to employ both hard and soft skill techniques. Similarly, properly setting and managing expectations, and selecting appropriate methods for one's project, involve roughly an even balance of hard and soft skills as well.

The remaining factors on the list are less general than the blanket factor of project management inexperience or inefficiency, and they are a bit more useful because they help to reveal not only reasons for failure but also hints about how these factors may be overcome.

Project plans and effort estimates are outputs primarily of hard skills, while leadership, communication, culture and ethics are generally associated with soft skills. Yet things aren't so black and white. Let's take poor planning. Suppose we determine that we need more education and experience in developing comprehensive project plans. How might we build on these skills?

- We can learn specific steps for how to define a work breakdown structure (WBS) that reflects project scope.
- We can study how to migrate a WBS into a scheduling tool.
- We can use this tool to assign and analyze resource assignments and other dependencies.
- We can crank out critical path diagrams
- In short, we can try to master the technical skills involved in developing a solid project schedule.

These cannot be our sole areas of focus, though.

Consider, for example, how do we go about defining a comprehensive WBS? We may have mastered the skills necessary to build a WBS that complies with a textbook definition of completeness, but unless we communicate scope expectations with our stakeholders, facilitate negotiation discussions to ensure that the scope is attainable and based on reality, and set expectations within the organization about the resources required to achieve the scope, in effect our perfect WBS has no value. The hard skills required to build the WBS have the higher barometer, but without applying the right set of soft skills, we won't be successful.

Similarly let's take poor leadership. If we self-assess and determine that we need to sharpen this interpersonal skill, we first need to determine if the traits of leaders can be learned, or are people born leaders, to coin a phrase? Effective leaders:

- Create an image of charisma and maintain an optimistic viewpoint.
- Use passion as a catalyst to generate enthusiasm.
- Communicate with the entire body, not just with words.
- Inspire others and bring out the potential in others by tapping into people's emotions.

Research shows that people can learn to exhibit these traits. It's clear, though, that as leaders, we need to have solid fundamental skills in the domain in which we are leading. An optimistic leader who tries to enthusiastically lead a team of resources to project completion will not be successful if he or she does not understand the intricacies of the project's scope, deliverables, schedules, and budgets. This leads us to the notion that perhaps the best leaders may come from the ground up, meaning they have strong prerequisite knowledge that gives them the ability to make sound decisions while they lead others to project success. If they are lacking in any of the prerequisite knowledge, then they need to surround themselves with key contributors who can assist them in filling in these gaps.

We'll revisit these top ten reasons for project failure again after exploring some of the inter-relationships among hard and soft skills.

## **Constant Crossovers**

# Work Breakdown Structure in MS Project

- Communicating with team and sponsor: scope development
- Negotiating with team, sponsor, external parties: scope refinement, prioritization, and approval
- Influencing: organizational priorities; resource acquisition
- Problem-solving: dependencies, critical path, achieving constraints
- Leading and decision-making: resource assignments, team development

# Communicating Status to Stakeholders

- Schedules
- Budgets
- Issue Lists
- Risk Lists
- Dashboards
- ...



Creating a WBS is generally classified as a hard skill. If I was creating a WBS for a project that I will execute alone, with only myself involved and with my being the sole source for the requirements and all project decisions, then perhaps the creation of a WBS would land solely in the hard skills court.

There is a crossover of skills required in the context of the WBS, though, on the far majority of projects where we as project managers are not the sole team member. As discussed above, we can't develop a WBS unless we understand the specific business objectives of what we are trying to achieve and the scope to be constructed that will realize those business objectives. To determine the business objectives and the scope to be modeled in the WBS, we need to work with numerous and disparate stakeholder groups, all of whom will have their own assumptions about priorities, and many of whom will introduce constraints. We need to apply leadership, organization, and negotiation skills to arrive at a mutually agreeable definition of scope reflected in a baselined WBS. Once obtained, how then do we achieve it?

To break the WBS down into a resource-leveled schedule with milestones and dependencies:

- We may need to further negotiate within and outside our organization for the appropriate resources, likely applying influencing skills to obtain the best team members available.
- We'll need to apply problem-solving skills to reconcile the embedded conflicts between scope, time, cost, and quality, and to develop response plans for risks related to the WBS.
- We'll need to exhibit strong leadership skills to guide and develop team members through project execution and decision-making skills to recommend appropriate corrective actions when variances arise.

By definition, projects change, and we need to respond to changes, primarily using soft skills. There are more factors involved, but hopefully this illustrates that a seemingly hard skill such as developing a project schedule simply cannot be done without applying soft skills as well.

Similarly, let's consider communicating. A typical project manager spends approximately 85% of their time communicating! Effective communicators may seem to have been born with a gift; they always know the right thing to say at the right time, at the right level, and with the right audience members. They know how to plan properly to design and implement communication strategies. They know how to actively listen, and to recognize the role of perception in overcoming perceptual differences as a speaker and a listener.

Many of these aspects of effective communications can be taught. We can learn how to deliver information, how to communicate in order to persuade, how to strengthen our active listening skills, how to be aware of and effectively express body language. We can try to master all of these skills in the context of effective communication, but fundamentally we need to have solid understanding of what we're communicating. It sounds so basic – but ask yourself if you have ever worked with a project or program manager, or a member of a senior management team, who tried to deliver a status update without full knowledge of what he was speaking to? The message may be delivered well from a stylistic point of view, sounding polished, but the content of the message is way off the mark. Those with specific knowledge of the content will immediately see that the communicator is essentially trying act his way through the status update. The crossover theme applies. To be most effective applying the soft skill of communicating status to stakeholders, for example, we need sharpened hard skills to effectively speak to schedules, budgets, issues, risk lists, and so forth.

Both of these examples illustrate methods where we can balance hard and soft skills to combat many of the top reasons for project failure, including failure to adequately identify and document requirements, poor planning, poor effort estimation, and inadequate communication.

## Threads

Applications of hard and soft skills crossover throughout the project lifecycle constantly, to the point where the majority of the soft skills become threads employed from initiation through closure.





For example, suppose we are tasked to write a project charter for presentation to a CIO who will ultimately approve or deny our project. We can select a template for a project charter and try to fill it in to the best of our ability. How do we perfect it?

- We must frame the project charter so that the project objectives clearly articulate measurable and achievable business value to the organization.
- We must account for potentially conflicting opinions and inputs from other stakeholders in the organization and put forth proposals that reflect the achievement of consensus.
- We must write clearly and concisely, recognizing that those who approve projects are not likely to read 10 to 15 pages of narrative but rather a 1-2 page summary underscoring the potential business value to be delivered.

Similar examples can be reviewed as we move throughout the life cycle. In planning we need to listen and problem-solve to identify and minimize known project constraints. In executing and controlling we need to filter information produced to the right level of detail required by our audience. In closing we need to use persuasion skills to ensure that a comprehensive post project review analysis is conducted.

Communications. Leadership. Decision-making. Influencing. Negotiating. They're not one-time endeavors but threads applied throughout a project. Properly applied we can help combat reasons for project failure such as expectations management; misalignment between project teams and organizations they serve; and poor leadership.



## **Balancing Techniques**



While seemingly an exclusively soft skill, communicating in the context of a project or program can be improved with tools and techniques. We've all seen the impact of ineffective communication on all aspects of the project life cycle:

- Information fails to get to the people who need it in time for them to use it.
- False or incomplete information is distributed and used as the basis for decision-making.
- Assumptions are confused for facts.
- Information distributed becomes a spark that ignites politics and conflict.
- Crucial information is withheld.
- Huge amounts of time are spent in unfocused, ineffective meetings.

Let's approach the creation of an effective communications infrastructure as a key component of our project management tasks. We can assess our stakeholders and their communication needs.

- Are they a key part of the project or are they peripherally involved?
- What types of information do they need to receive, with what frequency?
- What are they most concerned about?
- What is the most appropriate way to communicate the various project outputs they should receive?

A **communications matrix** can come together quite quickly to record answers to these questions, helping us to manage our project. However, we should prioritize time to assess its effectiveness.

A project manager may indicate on a communications matrix that he plans to email a project requirements document to the sponsor for approval, with a response requested in three business days. The project manager completed the entries of the matrix, but is this the most effective choice? Would the sponsors be likely to read and absorb all aspects of the requirements document? Would they even read it all? Why expend the effort producing a document that you need approved if it will remain unclear if the approvers even understand what they're signing? We can adapt our approaches and have a review meeting where stakeholders perform a walkthrough of the document, with questions, suggestions, and points requiring clarification noted. When signatures are eventually obtained, all can have confidence that there is meaning behind the signatures.

We can use matrixes and planning grids to help steer our decisions related to effective communications, once again balancing hard and soft skills. The right communication strategy will help overcome many top reasons for project failure, assisting in preventing and resolving issues, managing expectations, and resolving conflicts. The approach should be proactive and targeted. It includes delivering the needed information to the right stakeholder at the right time, applying a direct, collaborative, professional, and respectful communication approach, and using an appropriate communication technique for the task at hand. These and related techniques are risk mitigation strategies to help us overcome some of the top ten reasons for project failure, including ineffective communications and inadequate or misused methods.



# **Sources of Conflict**

Conflict is the result of disagreement, referring to any situation in which there are incompatible goals, thoughts, or emotions within or between individuals or groups.



Essentially any hard skill output has the potential to be a source of conflict on a project. Individuals reviewing a project schedule may have different priorities or goals in mind; they may be competing with the project for resources; they may be pushing to cut funds expended, or to deliver the product sooner; they may have potential customers looking for a particular feature-set sooner than reflected in the current schedule.

Sources for conflict are numerous. We need to recognize, though, that conflict is an inevitable consequence of organizational interactions, regardless of organizational size, and it can be beneficial.

Do you know some people, though, who avoid conflict like the plague? They might go out of their way to say whatever needs to be said to make everyone happy, all the while essentially burying the conflict temporarily in the sand until another issue is bound to resurface. We need a plan to deal with conflict directly.

### **Conflict Handling Modes**

There are several conflict handling modes, and knowing which is the most appropriate to apply in certain situations is an essential part of their effectiveness.



For example, we can **withdraw** or retreat from an actual or potential disagreement. Doing do may be useful for a cooling-off period, but it's not the best long-term strategy since the conflict is not addressed or resolved.

We can try to **smooth** things over, de-emphasizing or avoiding areas of difference and emphasizing areas of agreement. Similar to withdrawal, this is useful when a cooling-off period is needed but it similarly does not resolve the conflict.

We can search for **compromises**, bargaining and searching for solutions that bring some degree of satisfaction to all parties in the dispute. Everyone may not be perfectly satisfied but they can live with the solution.

We can use **forcing**, where we exert our viewpoint at the potential expense of another. This may be applicable when time is short, stakes are high, and there are no alternatives. The project manager must have a high-level of authority for this to be effective, however.

We can use **confrontation**, where we face the conflict directly and work with affected parties through the areas of disagreement. This takes time, and once again the project manager needs the right level of authority.

Why do we need a firm grasp on conflict resolution techniques? Essentially all of the top ten reasons for project failure have at their roots an underlying conflict. Conflicts can arise in planning and estimating, in managing expectations, in working with stakeholders to define requirements, in working with teams from different organizations and cultures, and so forth.

# Brandeis University's Master of Science in Management of Projects and Programs

The top reason for project failure listed above is "inadequately trained or inexperienced project managers." The curriculum of the Master of Science in Management of Projects and Programs (MSMPP) at Brandeis University's Division of Graduate Professional Studies (GPS) has been designed to provide a balanced coverage of hard skills and soft skills, supporting project and program management professionals looking to advance within the field.

Part of our mission is to focus on practical, cost-effective project and program management techniques. Professional standards often focus on <u>what</u> is involved with project management, with a stronger focus on hard skills, while our curriculum focuses on the <u>how</u>; that is, the techniques that can be tailored to best meet the needs of the project, the program, and the organization, using both hard and soft skills. Transforming one's viewpoint from *what* I need to do, to *how* I need to do it, requires an integrated understanding of business functions and corporate operations, as well as an interdisciplinary understanding of leadership and technology. GPS is committed to providing a rigorous graduate level curriculum for project and program management professionals looking to obtain this balanced skill-set.



### **MSMPP** Learning Outcomes

All GPS programs and courses have outcomes which indicate the skills that students will be expected to demonstrate upon program and course completion. The program outcomes of the Management of Projects and Programs master's degree are to equip graduates with the skills required to:

- Initiate, plan, execute, control, evaluate and close out projects in a way that assures the delivery of the negotiated scope and quality level, while meeting time and budget constraints.
- Effectively communicate the project/program status, issues, expectations and risks, both verbally and in writing, to project and program stakeholders.
- Demonstrate how projects contribute to an organization's ability to realize its **strategic goals and business benefits**.
- Exercise management and leadership skills in the conduct of programs and projects of various size, scope, and complexity that may be international in nature.

Within a particular course, outcomes are further broken down into weekly outcomes, so that as the modules of a course are explored, students can be aware of the skills that they are expected to demonstrate upon week or module completion. This focus on outcomes aligns well with the program's practical approach; the goal is for students to leave our courses and readily apply related concepts in their places of work.

This program's outcomes encapsulate essential skills for today's project and program managers, from managing a project from initiation to closure, communicating at all levels through an organization, ensuring that projects and programs contribute to organizational strategic objectives, and leading teams through the tailoring and application of project management techniques on projects of various size, scope, virtual collaboration needs, and complexity.

Even by looking just at our program outcomes' bolded words, one can see an embedded assumption about the essential integration of effective hard and soft skills.

### **Required Courses**



The first required course is *Foundations of Project Management*. This course is accurately named; it's foundational in nature, covering many of the core techniques of project management in a broad overview, incorporating both hard and soft skills. The process groups from initiating to closing and the knowledge areas of the Guide to the Project Management Body of Knowledge (PMBOK ® Guide)<sup>3</sup> are introduced as the weeks unfold, and students complete assignments such as writing a project charter, developing a work breakdown structure, and building a Microsoft Project schedule and accompanying reports. Students will see that many of the topics introduced in one module or week of the Foundations course are then explored in more depth in another core or elective course.

Of the remaining core courses, three focus on the soft or interpersonal skills, such as *Professional Communications, Organizational Leadership & Decision Making,* and *Negotiating & Conflict Resolution.* Three of the required courses focus on the hard or technical skills aligned with Advanced *Scheduling and Control, Risk Management for Projects and Programs,* and *Program Management: Theory and Practice.* Note that while the primary focus of a given course may be on hard or soft skills, within each course, the need for their integration is highlighted.

<sup>3</sup> "PMBOK® Guide" is a trademark of the Project Management Institute, Inc.

#### **Elective Courses**



While the core courses encapsulate skills that we believe are essential for all project and program managers, the electives allow students to focus on particular areas of interest.

For example, in some organizations project and program managers are responsible for working with vendors and managing contracts. The *Procurement and Contract Management* course covers the procurement process in depth, including principles and ethics, pricing methods, and all phases of contract administration for various types of contracts and pricing mechanisms.

Another elective is *Agile Project Management*, helpful to those who work in organizations that are adopting agile methods for some or all of their projects.

The two electives from the Virtual Team Management and Communication program are helpful to those who work with or manage virtual or global teams.

The *Challenges in Project Management* course looks at the various challenges that often arise within the project lifecycle, threatening project success. The course examines the reasons these challenges occur, when they occur, and how we can anticipate, prevent, and minimize them.

We also have a *Special Topics in Project Management* elective course; this allows us to introduce new topics into the program based on recent industry trends or particular application areas. For example, we have offered a special topics course in Clinical Trial project management, and we are currently developing two additional special topics courses. One will focus on managing government projects and contracts, and the other will cover business analysis techniques for the project manager.

In general, on the hard and soft skills barometers, each elective has an essentially level balance.



## **Defining Features**



As discussed throughout this paper, the MSMPP has been designed to provide **balanced** coverage of hard and soft skills. This is one of its defining features.

In addition, the curriculum is **relevant**, and this manifests itself in a couple of ways. We have a professional advisory council of senior project and program management executives across several industries who assist in guiding our program requirements and in recommending additional courses such as special topics. Also our curriculum remains consistent with the Project Management Institute's standards when applicable.

Another theme is that our program is **portable**, meaning that the graduate program explores the application of project and program management within the context of numerous industries, from software to financial services, construction, pharma, non-for-profit, and so forth, covering the facets of management, leadership, and technology. In course discussions, students learn collaboratively and gain from experiences, challenges, and best practices of other students and instructors who may be working within several different industries.

And finally, on a related note, the curriculum is **adaptable**, meaning that the techniques covered in the courses may be tailored based on an organization's size, structure, and culture. As a quick example, in the Risk Management course students explore a robust process to identify, analyze, and respond to risks. Many students report that in their work groups on the job, risks are managed much more informally. In the course, then, we discuss how students can take many of the techniques we cover and adapt them so that they become cost-effective workable approaches for their projects. It's very much an applied approach.

# **Top-Ten Revisited**

Reason for Project Failure	MSMPP Program
<ol> <li>Inadequately trained or inexperienced project managers</li> </ol>	MSMPP curriculum and program outcomes
2. Failure to set and manage expectations	Foundations of Project Management Negotiating and Conflict Resolution Program Management: Theory & Practice
3. Poor leadership at any and all levels	Organizational Leadership & Decision Making Management of Virtual & Global Teams
<ol> <li>Failure to adequately identify, document, and track requirements</li> </ol>	Foundations of Project Management Agile Project Management Risk Management for Projects and Programs Special Topic: BA for the PM
5. Poor plans and planning processes	Foundations of Project Management Advanced Scheduling and Control Risk Management for Projects and Programs
6. Poor effort estimation	Foundations of Project Management Advanced Scheduling and Control
7. Cultural and ethical misalignment	Foundations of Virtual Team Management across Cultures and Geographies
8. Misalignment between project team and business/organization it serves	Risk Management for Projects and Programs Program Management: Theory & Practice Procurement and Contract Management
9. Inadequate or misused methods	Risk Management for Projects and Programs Agile Project Management
<ol> <li>Inadequate communication, incl. progress tracking and reporting</li> </ol>	Foundations of Project Management Professional Communications Challenges in Project Management

The MSMPP program outcomes highlight skills that we expect all graduates to be able to demonstrate upon program completion, and there's certainly an underlying assumption that by realizing the program outcomes, students will be able to successfully combat the primary reasons for project failure.

The above table maps our program's courses to the top ten reasons for project failure. This isn't an exhaustive mapping by any means, but it illustrates how faculty in all courses address head-on how project managers can apply the techniques covered to their work efficiently and practically.

We can turn some of the negative reasons for project failure listed into positive skills. For example, in *Program Management: Theory and Practice* (and other courses), topics, discussions, and assignments address how to effectively set and manage expectations. In *Risk Management for Projects and Programs*, students explore risks related to requirements and scope management, along with methods to mitigate or avoid these risks. In *Advanced Scheduling and Control*, students discuss effective project plans and planning processes and have the opportunity to create project plans and budgets in the context of the courses.



#### Learning Hard Skills and Soft Skills Online

All MSMPP courses are delivered online. Students access their courses through the Brandeis University's learning management system which is based on Moodle. We require all students to complete an orientation course on our learning management system and our online approach, and based on student feedback, they enter their courses feeling well prepared.

Instructors, all of whom are **working professionals in the field**, create text-based online lecture materials and post these and other resources to the course site for each module of the course. The students and the instructor then engage in **asynchronous discussions** throughout the week, realizing the weekly outcomes.

There is **flexibility** in that students can log in at any time to complete discussion posts and assignments, so there is no set day or time to participate; however there is a **weekly pace**, with discussion posts due at designated points throughout the week. The online course week runs from Wednesday through Tuesday: original responses to discussion questions are due by Saturday and in some cases also on Monday; substantive replies to the posts of others are due by Tuesday, the close of the course week.

In this environment, students and the instructor form **connections** in the online discussions, exploring each module's key concepts and sharing professional experiences with one another. Students can't be quiet online, as online participation is a core part of our approach and in fact, online participation is associated with at least 30% of a student's final grade.

In addition to discussion posts, all courses require the completion of **assignments** which will vary from course to course. Among those courses that align primarily with **hard skills**, assignments provide students with opportunities to create project management deliverables such as project charters, project schedules, risk management plans, program management templates, agile release plans, procurement plans, etc. Among those courses that align primarily with soft skills, assignments incorporate the student's actual demonstration of **soft skills**, with the support of technology.

For example, in the *Negotiating and Conflict Resolution* course, students participate in **live virtual sessions** with other students and the instructor, using a tool called Blackboard Collaborate. They conduct **role plays** mimicking scenarios that require strong negotiation and conflict resolution techniques. The students and the instructor critique these role plays which are recorded and incorporated into the course site. In the Professional Communications course, students prepare **informative and persuasive presentations** which they record and share with their classmates and the instructor. The presentations are critiqued by the presenters, the audience members, and the instructor. In many MSMPP courses, live synchronous sessions may also be coordinated by **groups of students** working on projects and case studies.

### Summary

In summary, the MSMPP seeks to advance project and program management professionals in the field by providing a robust curriculum that balances the hard and soft skills essential of project and program managers. The curriculum is aligned but not tied to PMI Standards, it covers techniques applicable to numerous industries and application areas, and its applied focus allows students to tailor techniques based on an organization's size, structure, and culture.

#### Master of Science in Management of Projects and Programs

Managing projects and programs brings together the hard skills of planning, estimating and budgeting with the soft skills of negotiation, conflict management, influencing and effective communication. It requires an integrated understanding of business functions and challenges at various levels of corporate operation, and involves the interdisciplinary study of management, leadership and technology.

Brandeis University's Master of Science in Management of Projects and Programs prepares students already working in project management for assignments of increasing complexity and responsibility. It also provides a significant advantage to those wishing to advance into the field of project management.

1.877.960.2037 | info@brandeisonline.com | projectmgmt.brandeis.edu

5250\_BRU\_MSMPP\_WP\_09\_27\_2011





**Brandeis University**