SUMMARY REPORT ON FACULTY ASSESSMENT DAY, JAN 2014
Thursday, January 8th, 2015

On 8th of January 2014, more than 50 faculty and staff members gathered in the Special Events Room of the SUNY Maritime College to participate in a campus-wide assessment activity. In the morning session, the following talks were given:

- Assessment in SUNY Maritime College – Dr. Michael Alfultis
- Guide to Assessment – Dr. Timothy Lynch
- Report on Student Attrition Rates – Capt. Mark Woolley
- Report on Senior Exit Survey – Daniel An

After these talks, there was a breakout session for the departments to discuss assessment items. The summary of breakout session activities of each department was as follows:

- GBAT Department
  - Discussion on retention and assessment
  - Early look at ITM exit survey
  - Working on Self-study report on ITM External Review
- Humanities Department
  - Assessment of English Electives
  - Discussion on retention rates
  - Discussion of Entrance Requirements for the new graduate program that begins in 2015
- Engineering Department:
  - Discussion on retention rates
  - ABET Assessment and Future Requirements
  - Assessment for USCG review
- PET Department:
  - Discussion on retention and assessment
  - Discussion on Senior Exit Survey
- Science Department:
  - Discussion on retention rates
  - Assessment activity
- Naval Science Department:
  - Staff summer turnover (continuity) and manpower.
  - Midshipmen Guidebook and Staff SOP development.
  - Semester planning
- MT Department:
  - Changes in syllabi to accommodate Manilla 13 STCW amendments.
  - Discussion on retention rates.
- Library: Latest Information Management Results
In the afternoon, three departments gave presentations on their work during the breakout session:

- Engineering: Updates on ABET accreditation
- Science: Remedial Math (Math80) Report
- GBAT: ITM external review

I attach the minutes from each department and the slides used during the presentation for further information.

Sincerely,

Daniel An
Chair, Faculty Assessment Committee
Objective GBAT Department Session: to review the following items
1. Senior Exit for 2014
2. Discuss Student Retention
3. External Review of ITM Program

Summary GBAT Department Session
1. Undergraduate Senior Exit Survey 2014

Cornelia McCarthy presented the results of the 2014 Senior Exit Survey Results for ITT students. The faculty requested that when these numbers are presented in the future they include an exact number of students who graduated. Dr. McCarthy went through a comparison of the 2014 results with the 2013 results. This comparison showed that for almost all of the categories covered in questions 13 and 15 (previously question 14), the average rankings were lower on in the 2014 survey than in the 2013 survey. Since the responses to these questions are on a scale from 1 - 5 with 1 being the best ranking the lower average rating represents an improvement.

One area covered by the survey that was discussed in depth was the survey results related to advisement. The percentage of students who were "very satisfied" with the quality of advisement they received as a freshman increased from 15.5% in 2013 to 34.2% in 2014. However, after a discussion the faculty agreed that this could be improved further if all freshmen who intend to be ITT majors be assigned an advisor from the GBAT department in the first semester of freshman year. This department advisor would be in addition to the students LEAD advisor. The percentage of students who were "very satisfied" with the quality of academic advisement they received in with regard to the ITT major increased from 24.1% in 2013 to 50.0% in 2014. However, several faculty members suggested that to maintain and improve this level there should be more training for new advisors and clearer communication between the faculty and administration with regard to all academic policies.

An issue related to advisement that was voiced by the students in the "suggestions to improve the quality of education provided at Maritime College" was the lack of support from the department in acquiring the mandatory internship. The faculty discussed the role of the Career Planning office in this process but concluded that the department should take a more active part in the process. The department decided to establish a committee to look into the creation of a database of past internships, to establish joint efforts with other departments and to explore other ways that the GBAT department can support the students in their search for internships. The members of this committee are Alison Romain, Vicki Ferritto and Ian August.

In the 2014 survey questions 14 was a new question that asked students to "name a few courses which helped you develop your critical thinking skills." The two courses in the ITT program that were mentioned the most were GBTT 451 Marine Insurance and MATH 446 Operations Research. Professor Cooney and Professor Yahalom, who teach these courses, were asked to share their experience and insights on the aspects they incorporate into these courses to reach this goal. They agreed to do so on a one on one bases and in a discussion at GBAT department meeting on February 24, 2015.
2. Discussion of Student Retention
The GBAT faculty discussed the presentation in the morning session by Capt. Mark Woolley, Director of Institutional Research on student retention. We were concerned by the relatively high percentage of ITT majors that leave Maritime College after their sophomore year. It was recognized by the group that since ITT majors can continue their education in similar undergraduate business programs at other colleges they face a lower opportunity cost in leaving than do students in a license program. The changes to the ITT program that were made in order to conform to seamless transfer have reduced the opportunity cost of leaving even further. Therefore, the faculty discussed ways to increase the value of what the students can get from the ITT program and to ensure that the students recognize the unique opportunities of the ITT program early in their time at Maritime College. It was agreed that assigning a GBAT faculty member as an advisor to all entering students who express an interest in the ITT program could be the first step in forming a deeper commitment by the students to the ITT program. It was also agreed that this commitment could be strengthened by providing the students with activities outside of courses that brought them a greater sense of community with other ITT majors, exposed them to interesting topics covered in advanced courses in the ITT program and helped them on to see themselves on a path to a career in the Maritime industry. One suggestion was to start the Fall 2015 semester with a Welcome Party for ITT majors and GBAT faculty. It was pointed out by Professor Yahalom that in the past there was a student club for ITT majors and that this club could be revived. The faculty also agreed that greater support by the GBAT department in the process of securing an internship would help with student retention. Cornelia McCarthy and Chris Petrocelli agreed to form a committee to look into these suggestions and ways to increase students’ commitment to the ITT program.

3. External Review of ITM Program
Cornelia McCarthy presented an update on the self-study report of the ITM program that is being prepared for external reviewers of the program. Dr. McCarthy explained that some progress had been made on the components of the study that was outlined at a GBAT faculty meeting on November 18, 2014. That data on the characteristics of the ITM students had been received from the Instructional Research office and the admissions office. Additional information had come in from student life and career services and the library. Dr. McCarthy also demonstrated to the faculty an Angel course that has been set up for the collection of materials and collaborative work on the self-study. A plan was put in place for Dr. McCarthy to contact faculty members for further information and for aid in editing the report. It was determined that we would continue discussions of the self-study and make plans for the external review at our regular department faculty meetings.
Minutes of the Meeting of the Department of Humanities on Faculty Assessment Day (FAD)

Thursday, January 8, 2015

Convened by: Karen Markoe, Department Chair, at 2 PM

Present: David Allen, Ira Breskin, Elissa DeFalco, Chris Holmes, Larry Howard, Maryellen Keefe, Yumei Leventhal, Chris MacMillan, Mark Meirowitz, John Rocco, Hartley Spatt, Ed Tassinari

Guest: Rebecca Hyams, Humanities Liaison for the Stephen B. Luce Library

Excused Absence: Harris Eisenstadt, Tony DiPiazza, Julie Wosk

As Department Chair, Dr. Karen Markoe began the meeting with a happy announcement: Elissa DeFalco and Chris Holmes are expecting a baby girl in June. A round of congratulatory applause greeted this news.

Karen also announced that a “new” old student, Kevin Ferreira, has been nominated to participate in the Williams-Mystic Program.

On the other end of the student spectrum, following the actions of the Academic Board, the Department of Humanities has more students on restricted registration than on probation. Advisors should be careful and make sure students on RR complete a contract. Note that three seniors are on the list, which Karen will send around to all academic advisors.

On a sober note, Julie Wosk was not in attendance due to being in Chicago with her father, who is very ill, but rallying.

Sadly, this coming spring semester is the last term for Hartley Spatt and Yumei Leventhal. Karen reported that she currently had 107 applications to fill Hartley’s position, and there is the possibility that the Department could hire a person at the associate professor level. The President and Provost both emphasized diversity in making a choice. The Department bears in mind the value of diversity but also bears in mind that whatever a person’s social characteristics, the important thing is merit and qualifications for the job. Regarding the issue of diversity, the department wonders why that issue would not automatically support keeping in place Yumei Leventhal, a person of great merit and who is also female and of Chinese ancestry.

Karen advised that faculty members may have a chance to meet with the architect regarding renovations that will be done this spring and summer to Humanities offices and classrooms. Meantime, on a temporary basis, A-12 is set up as Joe Levert’s lab for an Engineering class.

Karen would like at least four members of the Humanities faculty to participate with her at Admissions to view and decide on applications of new students for Fall Semester 2015.
The assembled faculty gave a positive response to Karen’s question about whether the Department should meet this spring with its Industry Advisory Board (IAB). The meeting would potentially take place in March.

Rebecca Hyams, from the Library, spoke to indicate that the Library is working to expand guideline packets on several subjects, including academic integrity, which can be used as part of the institutional syllabus, sent around by the Provost. The institutional syllabus is mandatory and indications are that the administration will be tough about its inclusion in all syllabi.

Mark Meirowitz is working with the library to find a good historian to be featured as a speaker in the Library’s continuing lecture series.

Chris Holmes spoke to the need to set admissions criteria for the new Humanities graduate program. Discussion around the table ranged from waiving letters of recommendation as not being helpful to arranging Skype interviews with applicants. Larry Howard urged that Admissions staff not be given complete control over who is to be admitted and that a faculty committee have the final say. Chris Holmes will write and send around the proposed Admissions criteria.

Karen set February 11 as the tentative date for the next departmental faculty meeting.

Elissa DeFalco will send around a “cheat sheet” for how Humanities does assessment. She noted that one of the main problems as regards assessment of student outcomes in the department is that “we haven’t been good at archiving data.” Moreover a rubric for critical thinking needs to be developed that can be applied to both freshman and seniors so that comparative statistics are drawn from the same page.

The archival problem can be attacked by sending as much data as you have available to Elissa, who will use it to compile an historical database. The rubric needs work for both History 101-102 and ENGL 101-102.

In extracting and compiling any data it is critical that Humanities majors be singled out, e.g. an instructor giving any assessment survey or exam needs to require students to mark their major on the document.

Elissa DeFalco recounted the strategy regarding HIST 101 and 102 and noted that 102 is now designated a social science class and assessment tools have to be designed for the class with that designation in mind. Larry Howard, whose PhD is in Political Science, volunteered to meet with History instructors to help define the social science criteria involved.

Elissa also noted that ENGL 101 graphs of pre and post tests show a nearly “perfect symmetry” between students not knowing things in the pre-test, and demonstrating learning in the post tests.

On the other hand, HUM 201 and 202 have the “biggest divide” in terms of students not meeting expectations. The name of the two courses (1 & 2) is “World Literature and Culture,” and after the work on adjusting the curriculum to comply with “seamless transfer” requirements, HUM
201 has been tagged as non-Western, or “other” culture and literature, while HUM 202 has been tagged as Western.

In short, new and additional material needs to be found to provide non-Western course content. Karen Markoe noted that Chinua Achebe, who wrote “Things Fall Apart” in post-colonial Nigeria, is an author who falls in the category of the new material needed.

John Rocco also suggested that in part the tests ought to be redesigned to ask more about genres.

Elissa DeFalco is creating a “rolling Word file” to compile assessment data on electives as part of her concern to establish an archive of material that can be used for future reports and comparisons. She also indicated that from now on when reports are prepared on electives, instructors should include a few paragraphs about what he or she learned from the results of assessing student outcomes.

Larry Howard indicated that he thought Elissa’s focus on what we learn from assessment goes to the basic significance and value proposition of the assessment process. Why do we do it unless there is something of importance that we can learn from it?

Chris Holmes proposed that we define a standard level of competency, e.g. a “B-“ grade, for passage of a student into ENGL 101 from ENGL 90 or ENGL 90F. Currently, several students demonstrate the problem of getting a passing grade in ENGL 90 or 90F, but not being able to function well in ENGL 101.

Elissa DeFalco noted that according to the senior survey, our graduates “like us.” She will email the survey results to all members of the Humanities faculty.

Elissa also noted that writing continues to be of importance, and the opportunities for writing across the curriculum continue to exist. It is up to us to leverage those opportunities.

Karen Markoe noted that President Alfultis wants more courses on campus during summer session and so each Humanities instructor should think about whether he or she could teach a summer course in the classroom. She also noted that she had recommended a student good in history to tutor in the Learning Center, and said “we need to recommend good students” as potential tutors in the Learning Center. The process of how tutors are currently brought into the Learning Center is opaque.

A short discussion ensued about the possibility of bringing back Honors classes, with no resolution.

Chris MacMillan announced that the Provost wants to hold advisory elections for Chair this spring, and so Chris wants to get the issue out of the way as soon as possible. He will distribute nomination forms in the mailboxes of Humanities faculty next week.

There being no further business, Dr. Markoe adjourned the meeting at 3:10 PM.
Librarians discussed the Fall 2014’s assessment data from the LEAD 101 Information Assessment section.

- Topics that were addressed:

1. This past year the administering of the assessment tool (pretest and posttest) did undergo some significant changes. The general consensus was that the results gathered from the posttests were greatly influenced by some of those changes.
2. Review of the limited data gathered was encouraging. Improvement from pretest to posttest was significant with the exception of the level of retention with regard to the use of web resources.
3. Further discussion with the library, LEAD 101 administrators and instructors is necessary to iron out some logistics relating to the administration of the posttest.
4. Changes in the librarian instruction portion of the process were discussed. The result was a more hands on approach. Instruction would be done at the computers in conjunction with librarian’s guidance.
5. Prior to taking the pretest, students would be encouraged to acquaint themselves with the library’s website.
Minutes of the Meeting of the Science Department on Faculty Assessment Day (FAD)

Thursday, January 8, 2015

Convened by: Dr. Kathy Olszewski, Department Chair

Discussion on Student Retention
Science department looked at Senior Exit surveys and discussed the current situation of MES retention rates. The faculty found some comments from the free response on the senior exit survey which may pertain to MES such as:

- More waterfront opportunities
- Only 1 section of some classes per semester/year
- Computer access, computer speed, software needed
- Lack small boat experience
- Campus life issues – parking, library hours, AC/heat, regiment

Some faculty noted that MES attrition rates have a correspondence with SAT grades as was noted from Mark’s presentation. Some good ideas that could help retention rates were suggested:

- Freshmen students need an MES advisor – could have an MES advisor in addition or instead of a LEAD advisor.
  - Idea: give MES advisor in addition and that person has PIN
- We have a large percentage of commuter and civilian students compared to other programs and these students feel disconnected.
  - Having a space where the students could meet and study would help.

The faculty asked for following information from Institutional Research department:

- Attrition from major (not college).
- Of students who are counted in the MES attrition numbers – what math class did they start in?
- Of students who left, did they complete MATH 111 or 101?
If the students being lost have not completed their first math course then the skills on the incoming class are likely the issue.

Assessment Activities

- Marie DeAngelis, Caterina Penzeca and David Wickham worked on updating the MES grid.
- William Losonsky, William Massano and Ioana Malureanu worked on assessment of Physics 201.
- Math group, directed by Linda Sturges, worked on rewriting learning outcomes of math courses, to better reflect the course content and to clarify the measurement of outcomes.
Faculty Assessment Day
08 January 2015
Dr. Michael Alfultis
Why Make the Time (and Effort) to do Assessment?

- FACILITATES STUDENT SUCCESS
- Assessment of Program (Mission) Effectiveness
- Faculty Professional Development
- Consistency
- Create a Learning Community
- Establish an Institutional Identity
THE DEFINITION OF INSANITY IS
DOING THE SAME THING OVER AND OVER AGAIN AND EXPECTING DIFFERENT RESULTS
Assessment...

• Determines where should continue to do the same thing to get the same result
• Determines where we need to do things differently to get a different result
Outcomes Pyramid

http://assessment.uconn.edu/primer/goals1.html
Assessment Learning Cycle

http://assessment.uconn.edu/primer/cycle.html
Assessment Promoting Institutional Effectiveness

http://assessment.uconn.edu/primer/cycle.html
A Practical Example

Coast Guard Academy’s Shared Learning Outcomes:

– Ability to Acquire, Integrate, and Expand Knowledge
– Critical Thinking Ability
– Communication Effectiveness
– Leadership Abilities
– Personal and Professional Qualities
MES Framework

Program Review

End-of-Course Review

Core Dimensions

Developmental Dimensions

Performance Dimensions

Course Objectives

Course Activities

Assessment of Student Performance
MES Core Dimensions

MES graduates shall

1. Be Knowledgeable & Competent
   • Demonstrate scientific & technical proficiency
   • Synthesize information from data, knowledge from information, & wisdom from knowledge & experience

2. Think & Be Aware
   • Exhibit critical & other forms of thinking
   • Be aware of self, situation, & surroundings (changing conditions)

3. Communicate Effectively
   • Communicate results of one’s work, as an oral presentation, scientific poster presentation, and technical or non-technical writing

4. Lead & Be A Role Model
   • Demonstrate Coast Guard Core Values
   • Exhibit character & integrity
   • Be self-sufficient & self-confident
The overall goal of this course is not to develop GIS Technicians fully knowledgeable in the use of GIS. Rather, the aim of this course is to introduce future Coast Guard decision-makers to the theory and use of geospatial technologies for emergency planning and response, facilities management, and operational resource management and decision-making. Specifically, upon completion of this course, students will be able to:

1. Describe/explain to someone with no GIS background how the “real world” is modeled within a GIS using the following terms and concepts:
   - Scale
   - Datum
   - Map Projection
   - Topology
   - Raster Data Structure
   - Vector Data Structure
   - Spatial Entities
   - Spatial Data
   - Attribute Data

2. Recall the different types and sources of spatial data

3. Demonstrate the ability to input data into a personal geodatabase and edit the data within the database.

4. Demonstrate the ability to map quantities, make measurements, and perform database queries and other spatial analyses using GIS software.
5. Apply cartographic design principles to produce maps, tables, graphs, and other output using GIS software.

6. Discuss the following GIS issues
   a. Data Quality and Errors
   b. Data Distribution and Sharing
   c. GIS Project Management

7. Apply the GIS principles gained in this course to design, assemble, and utilize a personal geodatabase for emergency planning and response. Specifically, they will be able to
   a. Design a geodatabase,
   b. Identify the data needed for the geodatabase,
   c. Acquire the required data, assess its quality, and integrate it into the geodatabase,
   d. Implement the database for emergency response planning.

8. Effectively illustrate the applicability of GIS for USCG operational planning and decision-making.
Knowledge and Competency

The overall goal of this course is not to develop GIS Technicians fully proficient in the use of GIS. Rather, the aim of this course is to introduce future Coast Guard decision-makers to the theory and use of geospatial technologies for emergency planning and response, facilities management, and operational resource management and decision-making. Specifically, upon completion of this course, students will be able to:

1. Describe/explain to someone with no GIS background how the "real world" is modeled within a GIS using the following terms and concepts:
   - Scale
   - Datum and Reference Ellipsoid
   - Map Projection
   - Topology
   - Raster Data Model
   - Vector Data Model
   - Spatial Entities
   - Spatial Data
   - Attribute Data

2. Recall the different types and sources of geospatial data

3. Demonstrate the ability to input data into a personal geodatabase and edit the data within the database.

4. Comprehend importance of data quality and database design to the proper implementation of geospatial technologies to any enterprise.

5. Demonstrate the ability to map quantities, make measurements, perform database queries, and other geospatial analyses using GIS software.

6. Apply cartographic design principles to produce maps, tables, graphs, and other output using GIS software.

7. Apply the GIS principles gained in this course to design, assemble, and utilize a personal geodatabase for environmental applications. Specifically, students will be able to
   - Design a geodatabase,
   - Identify the data needed for the geodatabase,
   - Acquire the required data, assess its quality, and integrate it into the geodatabase,
   - Apply wide variety of geospatial analysis techniques on the data to answer an environmental problem.
Geospatial Sciences I
New Course Objectives (cont)

**Thinking and Awareness**
1. Exercise creativity and innovation in applying the wide variety of geospatial analysis techniques to various environmental problems.

**Communication**
1. Apply cartographic principles to effectively communicate geospatial data and analyses to technical and non-technical audiences.
2. Effectively utilize oral and visual communication skills to present results of course assignments to peers.
3. Demonstrate continued development of scientific writing skills through lab reports written in scientific format and style.

**Leadership**
1. Demonstrate proper awareness of the validity of the results from geospatial analyses and the implications of the results.
2. Move towards self-sufficiency and self-confidence in performing geospatial analyses in order to apply these techniques in other courses and applications.
3. Successfully complete a wide range of tasks ranging from instructor-directed to working independently.
Concluding Thoughts & Reflections

• Incorporation of Coast Guard Academy’s Shared Learning Outcomes into my courses changed my approach to teaching and learning!

• Assessment activities allows us to articulate what we value
  – Internally to our students and amongst our colleagues
  – Externally to prospective students and to the maritime community and industry
The Assessment Triangle
Why Make the Time (and Effort) to do Assessment?

- FACILITATES STUDENT SUCCESS
- Assessment of Program (Mission) Effectiveness
- Faculty Professional Development
- Consistency
- Create a Learning Community
- Establish an Institutional Identity
Mass Maritime - Student Learning Outcomes (2010)

- Intellectual Learning:
  - Competency in written, oral, and listening skills;
  - Ability to critically and creatively comprehend and evaluate new information and ideas;
  - Ability to use quantitative reasoning skills, applying basic concepts of mathematics and science and utilizing relevant computer skills;
  - Basic knowledge and understanding of the social, physical, and life sciences;
  - Competency within the major.
Mass Maritime - Student Learning Outcomes (cont)

- Leadership and Personal Development
  - Ability to work and achieve goals as a member of a team;
  - Ability to make rational decisions while complying with a set of standards;
  - Ability to perform and behave in a professional manner acceptable for career goals;
  - A sense of curiosity;
  - Ability to make appropriate future decisions based on past and present conditions and circumstances.
Mass Maritime - Student Learning Outcomes (cont)

- Global Awareness and Social Responsibility
  - A sense of global awareness and social responsibility;
  - Ability to make decisions and act in a socially responsible manner.
Maine Maritime's Institutional Objectives (2014)

- Demonstrate competency in written and spoken English.
- Apply the scientific method.
- Apply fundamental concepts in mathematics.
- Be technologically proficient.
- Develop a global perspective of the humanities and social sciences.
- Gather, analyze, and interpret information.
- Demonstrate competency in their major.
- Explore and experience career paths in their program of study.
- Demonstrate and inspire ethical behavior.
- Develop skills to motivate others to achieve a common goal.
- Recognize environmental consequences of individual and professional decisions
Cal Maritime Institution-Wide Student Learning Outcomes

• Communication: Coherently and persuasively share information.

• Critical and Creative Thinking: Comprehend, analyze and objectively evaluate information and ideas; approach issues in new and different ways, often through synthesizing or applying information.

• Quantitative Reasoning: Use numerical information to identify, analyze and solve problems.

• Scientific Reasoning: Apply scientific inquiry to understand the natural world.

• Lifelong Learning: Demonstrate a commitment to personal and professional development.
Cal Maritime Institution-Wide Student Learning Outcomes

- **Discipline-specific Knowledge**: Demonstrate expertise in the concepts and technologies of a chosen field, particularly its relation to the maritime world.

- **Information Fluency**: Define a specific need for information; then locate, evaluate, and apply the needed information efficiently and ethically.

- **Leadership and Teamwork**: Work toward common goals and motivate and empower others to achieve them; foster collegiality, goodwill and community within a diverse group.

- **Ethical Awareness**: Use ethical reasoning in personal, professional, and social decision-making.

- **Global Stewardship**: Demonstrate awareness of cultural differences and the responsibilities associated with global welfare.
Faculty Assessment Day

8 January 2015
Timothy G. Lynch, Ph.D.
Provost and VPAA
Assessment

• “The longest four-letter word in higher education”

• Confusion and resistance: direct v indirect measures? Outcomes vs. Objectives? Isn’t grading the same as assessing??

• No, it goes much deeper than this.

• It is impactful. D3 and continuous improvement

• Current state of assessment and accreditation
External Accreditors

- Middle States Commission on Higher Education
- USCG
- ABET
- SUNY
- Certificate and other programs

- Many different guidelines and terminologies
- Increasingly tied to funding—
- The links between assessment and accreditation are vital... “expect a harsh spotlight”
Problem

• Lack of clearly defined institutional SLOs to which programmatic, departmental and course objectives can be mapped—

• Solution: A strategic plan that articulates these and which is closely linked to both assessment and the MSCHE standards
• 2012—reaccredited but with some concerns…most of which dealt with the lack of assessment initiatives

• 2014—interim report mandates implementation of an organized and sustained system for the assessment of institutional effectiveness…and steps taken to assess student learning across all programs
MSCHE

• New, more concise standards (from 14 to 7)
• Central focus remains on student learning and student experiences
• Expanded emphasis on institutional effectiveness and on the creation of a “culture of evidence”
• Curricular and other changes MUST be generated by a desire to improve student learning
Standard I: Mission and Goals

Standard II: Ethics and Integrity

Standard III: Design and Delivery of the Student Learning Experience

Standard IV: Support of the Student Experience

Standard V: Educational Effectiveness Assessment

Standard VI: Planning, Resources, and Institutional Improvement

Standard VII: Governance, Leadership, and Administration
• Council on Assessment
• Previous mandates focused on general education
• Cumbersome rubric for Institutional Effectiveness: design, implement, impact
• www.sunyassess.org (leave on the last S!)
SUNY Council on Assessment
Assessing Institutional Effectiveness Self-Assessment

Background: The SUNY Council on Assessment (SCOA) was established to support SUNY campuses in their efforts to assess institutional effectiveness and student learning outcomes. In fulfillment of that charge, SCOA has developed this self-assessment rubric focused on institutional effectiveness. The idea to design a rubric for this purpose took inspiration from a self-assessment rubric designed by Linda Suskie, and grew out of a compilation study of commendations, suggestions, and recommendations of Middle States accreditation reviews of SUNY campuses between 2010 and 2012. In all, 26 decennial team visits, 6 follow-up visits, and 9 Periodic Review Reports were examined for appraisals of how these institutions were addressing the assessment of institutional effectiveness. From that study, it became clear that campuses would benefit from having a tool that they could apply to their own institutions in order to gauge how they were doing in this area. An analytic rubric seemed the best way to present the various aspects of assessing institutional effectiveness. Since this rubric was designed as an institutional self-assessment tool, it is intended to serve more in a formative function rather than a summative one. It can be used to shine a spotlight on areas of institution-level assessment that may need improvement in order to advance overall institutional effectiveness. The rubric may also reveal how well an institution is “closing the loop” by questioning how well assessment findings are used in planning and resource allocation. This rubric was not designed for the comparison of institutions, either within or outside of SUNY. Nor was it designed to ensure that an institution has achieved the standards set forth by Middle States. It was designed in the spirit of the assessment movement, for the use by institutions for their own self-improvement.

Interpretative Notes: The language used throughout the rubric was intended to be applied flexibly to the very different parts and levels of organization that form the structure of colleges and universities. Thus, the terms “area” and “unit” were meant as a generic terms for any institutional organizational entity (e.g., different divisions, programs, departments, etc.). Similarly, the term “outcome” must be understood as relative to the particular area or unit that is being examined. In some instances, depending on the department or unit, the term “outcome” may refer to student learning outcomes. In other instances, outcomes other than student learning outcomes may be the focus. The intended meanings of the terms attached to the four levels of the scale also warrant comment. These labels were chosen to convey degrees of institutional progress toward assessment-related goals, and the labels are approximations at best. “Not evident” suggests assessment-related work is mostly or entirely absent. “Emerging” implies such work is underway, possibly newly created, but still largely piecemeal in its manifestation and with no overall institutional coordination/support. “Proficient” means the institution is doing a competent job with assessment, but there are still slight gaps/deficiencies. “Excelling” is meant to capture the point at which an institution has a thorough and accomplished process in place. Of course, to say that it is “accomplished” does not mean assessment is done. We are all well aware that assessment is a recurring process in the service of continual institutional improvement. In that same spirit, this rubric is likely to be a continually evolving document. Suggestions for improvement can be directed to the developers via www.sunyassess.org.

Directions: For each row in the rubric, select the level (0, 1, 2, or 3) that most accurately describes the current state of your institution. Optimal results may be obtained by requesting that a broad range of campus constituencies complete the rubric, and then using the results for discussion and planning.
<table>
<thead>
<tr>
<th>Aspect</th>
<th>Element</th>
<th>Goal</th>
<th>Level 0: Not Evident</th>
<th>Level 1: Emerging</th>
<th>Level 2: Proficient</th>
<th>Level 3: Excelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td></td>
<td></td>
<td>There is no overall institutional plan for assessment. Assessment may be conducted at the institution, but when it occurs, it is completed on an ad hoc basis, perhaps in response to specific challenges.</td>
<td>Some, but not all functional areas/units conduct assessment systematically and these have policies and plans that pertain to assessment within the area/unit; there is no coordination of or standards for assessment set by the institution.</td>
<td>All functional areas/units conduct assessment systematically and may have written policies to guide the process. There is no overall institutional plan that serves to coordinate use of assessment data to improve institutional effectiveness.</td>
<td>There is a written plan that specifies responsibility for conducting assessment at both unit and institution levels and that identifies reporting timelines and procedures. The plan also indicates how assessment data is channeled into the strategic planning and budgeting process.</td>
</tr>
<tr>
<td>Design</td>
<td>Outcomes</td>
<td></td>
<td>Outcomes either have not been written, or where they do exist, they are not stated in ways that directly suggest how to measure them.</td>
<td>Some but not all units have their own outcomes statements. For example, academic affairs may have identified student learning outcomes, but no other units have identified outcomes.</td>
<td>All units have outcomes statements, but not all of these are stated in terms that link to measurement operations.</td>
<td>All units within the institution and the institution as a whole have clearly stated and measurable outcomes.</td>
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<td>Course/program or other functional area outcomes, when present, are not mapped to or aligned with higher level outcomes nor are they shown to be related to institutional mission, goals, and values.</td>
<td>Alignment of outcomes has been achieved in some but not all areas/units.</td>
<td>Alignment of lower level outcomes to higher level outcomes within areas/units is mostly complete. Alignment of higher level unit outcomes to institutional mission, goals, and values is not complete.</td>
<td>All units indicate how their outcomes are aligned with institution mission, goals, and values. Alignment within units is specific and appropriate to the unit and its role in the institution. Alignment of outcomes indicates a strong sense of shared purpose within the institution.</td>
</tr>
<tr>
<td></td>
<td>Alignment</td>
<td></td>
<td>No resources are available to support assessment.</td>
<td>Resources to support assessment are handled on an ad hoc basis.</td>
<td>There is budgetary support of assessment activities within units that conduct assessment, but there is no overall institutional plan for providing the full range of resources to support assessment.</td>
<td>The institution and each area/unit has made a commitment to assessment and provides all necessary resources for assessment.</td>
</tr>
<tr>
<td>Resources</td>
<td></td>
<td></td>
<td>Assessment, if occurring, is done by lone individuals charged with assessment responsibilities.</td>
<td>Some units involve faculty/staff in assessment planning and collection and review of data.</td>
<td>All units involve all faculty/staff in some aspect of assessment, planning data collection, and/or review of data.</td>
<td>All members of the university community are involved in assessment activities in their respective units. Institution leaders frequently articulate assessment as an important value/activity of the institution.</td>
</tr>
<tr>
<td>Implementation</td>
<td>Culture</td>
<td></td>
<td>Data from multiple sources and measures are considered in assessment.</td>
<td>Assessment data are not collected.</td>
<td>Assessment data are collected in one or more units but consists primarily of survey results and/or anecdotal evidence.</td>
<td>Assessment is based on, where appropriate, multiple measures of performance, including direct and indirect measures and quantitative and qualitative data.</td>
</tr>
<tr>
<td>Data Focus</td>
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<tr>
<td>Aspect</td>
<td>Element</td>
<td>Goal</td>
<td>Level 0: Not Evident</td>
<td>Level 1: Emerging</td>
<td>Level 2: Proficient</td>
<td>Level 3: Excelling</td>
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</tr>
<tr>
<td>Implementation</td>
<td>Sustainability</td>
<td>Assessment is conducted regularly, consistently, and in a manner that is sustainable over the long term.</td>
<td>The institution cannot document that there is sustainable assessment activity occurring within any functional responsibility areas (academic, student services/support and administrative offices).</td>
<td>The institution can document that sustainable assessment activity is regularly occurring within several units of the institution, but assessment practices are either not universal or not sustainable for the long term.</td>
<td>Assessment is routinely conducted in most, if not all, units. The sustainability of the assessment activity varies in terms of how regularly it occurs or in how systematically outcomes/goals are assessed. Assessment activity is becoming a regular part of each unit’s functioning.</td>
<td>Assessment is routinely conducted in all appropriate units. The sustainability of the assessment activity is evident in that assessment occurs regularly and systematically and has been ongoing for many years. Assessment activity is a regular part of each unit’s functioning.</td>
</tr>
<tr>
<td></td>
<td>Monitoring</td>
<td>Mechanisms are in place to systematically monitor the implementation of the assessment plan.</td>
<td>There is little or no evidence that the institution has in place or is developing effective systematic monitoring of the quality and implementation of assessment activities within and across units.</td>
<td>Assessment plans are in place. Systematic monitoring of the quality and implementation of assessment activities is occurring within some units, but not others. There is little evidence of institutional level monitoring of assessment activities.</td>
<td>Systematic monitoring of the quality and implementation of assessment activities is occurring within most, if not all, units. The institution has begun establishing a means for ensuring that all units regularly conduct and report assessment activities.</td>
<td>There is evidence of systematic monitoring of the quality and implementation of assessment activities within all units. The institution has an established mechanism for monitoring unit compliance with institutional assessment policies.</td>
</tr>
<tr>
<td>Impact</td>
<td>Communication</td>
<td>Assessment results are readily available to all parties with an interest in them.</td>
<td>Assessment results, if they exist, “live” in the individual unit and are not broadly communicated.</td>
<td>Assessment results are owned by the functional area and are shared with others on an as-needed basis.</td>
<td>Units within the institution share assessment results routinely with each other or make them accessible to others within the institution. Public disclosure of appropriate assessment data is limited.</td>
<td>Assessment results are disseminated to appropriate audiences at appropriate times; data appropriate to external audiences are available in easily accessible public domains; data needed for internal decision making are readily accessible to decision makers.</td>
</tr>
<tr>
<td></td>
<td>Strategic Planning and Budgeting</td>
<td>Assessment data are routinely considered in strategic planning and budgeting.</td>
<td>Assessment data stay within the area in which they were collected. They do not factor into institutional strategic planning and budgeting.</td>
<td>One or more units use assessment results in budgetary requests and/or to inform strategic planning.</td>
<td>Assessment data are used in strategic planning and budgeting, but there is no clear mechanism in place to ensure this is accomplished routinely.</td>
<td>Institution is able to demonstrate that strategic planning and budgeting processes have routinely used assessment data in decision making.</td>
</tr>
<tr>
<td></td>
<td>Closing the Loop</td>
<td>Assessment data have been used for institutional improvement.</td>
<td>There is little or no evidence that assessment results are used for institutional improvement.</td>
<td>There is evidence that assessment results are occasionally used for institutional improvement.</td>
<td>There is evidence that all units regularly use assessment results to inform improvements.</td>
<td>There is an institutional commitment to using assessment results to inform improvements; all units regularly use assessment data to close the loop; the institution presents evidence that assessment results, including student learning assessment, are routinely used for institutional improvement, effectiveness and planning.</td>
</tr>
</tbody>
</table>
Broader and Deeper Assessment

• Discipline-Specific
• Syllabi must contain SLOs
• SLOs must be assessed—not all SLOs are assessed in each course, each term
• Embedded assessments and SLO-specific prompts
• Choose a few—should be common across sections
Assessment activity (suggestion)

- Step 1: All course syllabus should already have course learning outcomes listed

Institutional Syllabus
Math 111 - Applied Calculus I
Spring 2015

A. COURSE DESCRIPTION
Math 111: 4 class hours, 4 credits. Graphs and functions; introduction to limits; differentiation and
instructor’s syllabus for additional requirements, such as using Matlab, access code: 01172397 0830029

C. STUDENT LEARNING OBJECTIVES
a) Upon successful completion of Math 111, the student will be able to:
   • evaluate limits algebraically, graphically, and numerically;
   • compute the derivative in terms of instantaneous rate of change;
   • differentiate the elementary functions;
   • apply the properties of derivatives to sketch functions, optimize functions, and solve problems.
Assessment activity (suggestion)

• Step 2: Choose an exam or a writing assignment (or it could be several items combined) that is related to the learning outcomes.

• Make a rubric on what performance is (E)xcellent, (M)eeting, (A)proaching or (N)ot Meeting.

• For example, a question that was worth 8 points can be broken down as
  – Exceeds: \( \geq 7 \) points
  – Meets: \( 5-6 \) points
  – Approaches: \( 3-4 \) points
  – Does not meet: \( \leq 2 \) points
Example: Course objectives to be assessed.

Math 102 Course Assessment, Spring 2014

Math 102 - Calculus II (Engineering Track) Spring 2014

Math 102 is a required course for all Bachelor of Engineering degrees. In Spring 2014, two sections of Math 102 were taught by Dr. Debbie Yuster, the course supervisor, and one section was taught by Dr. Daniel An. The course learning outcomes are:

a) Course Objectives

At the end of Math 102 (Calculus II), students will be able to

1. understand the notion of an antiderivative and solve initial value problems;
2. understand the concept of the definite integral;
3. apply the Fundamental Theorem of Calculus to evaluate definite integrals;
4. master techniques of integration;
Learning Outcome 4: Master the techniques of integration

Problem 1 was used to measure this learning outcome. The problem had three subparts, each worth 5 points:

- \( \int \frac{2}{5x \ln 3x} \, dx \), which requires \( u \)-substitution,
- \( \int x^2 \sin 3x \, dx \), which requires integration by parts (either repeated or tabular method),
- \( \int \frac{x + 2}{x^2 - 4x} \, dx \), which requires integration by partial fraction decomposition.

The question was worth 15 points with the following mastery levels:

- **Exceeds:** \( \geq 13 \) points
- **Meets:** 9-12 points
- **Approaches:** 5-8 points
- **Does not meet:** \( \leq 4 \) points
Example: Result and discussion

Results:

The following table summarizes the results for the assessed learning outcomes:

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Does Not Meet</th>
<th>Approaches</th>
<th>Meets</th>
<th>Exceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (definite integral concept)</td>
<td>7%</td>
<td>28%</td>
<td>34%</td>
<td>31%</td>
</tr>
<tr>
<td>4 (integration techniques)</td>
<td>8%</td>
<td>30%</td>
<td>41%</td>
<td>21%</td>
</tr>
<tr>
<td>7 and 8 (convergence of infinite series)</td>
<td>25%</td>
<td>35%</td>
<td>23%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Discussion:

We are not surprised to see that the topic of infinite series was mastered relatively poorly –  anecdotally we have always found this to be the case. Perhaps less time should be spent on other
ABET Visit Fall 2016

Apply for Re-Accreditation
Self Study Report
Due
June 30, 2016
What Has Changed for 2014-15 in the General Criteria?

• Criterion 6. Faculty
  – Wording change in the first sentence
  – The program must **be of sufficient number and must have the competencies** demonstrate that the faculty members are of sufficient number and they have the competencies to cover all of the curricular areas of the program.
Self Study Report
Must Answer ALL Questions
(on following check sheets)
Enter “C” for concern, “W” for weakness, and “D” for deficiency

If the program has no deficiencies or weaknesses, check this line.

1. STUDENTS

- Evaluate student performance
- Monitor student progress
- Advise students regarding curricular and career matters
  - Have and enforce policies for accepting both new and transfer students
  - Have and enforce policies for awarding academic credit for courses taken at other institutions
  - Have and enforce policies for awarding academic credit for work in lieu of courses taken at the institution
  - Have and enforce procedures to ensure and document that students who graduate meet all graduation requirements
## 2. PROGRAM EDUCATIONAL OBJECTIVES

<table>
<thead>
<tr>
<th>Published and consistent with institution’s mission, the needs of the program’s constituencies, and these criteria</th>
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</thead>
<tbody>
<tr>
<td>Documented, systematically utilized, and effective process, involving program constituencies, for the periodic review of the program educational objectives</td>
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</table>
### 3. STUDENT OUTCOMES

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Program has documented student outcomes that prepare graduates to attain the program educational objectives</td>
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<tr>
<td>(a) ability to apply knowledge of mathematics, science, and engineering</td>
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<td>(b) ability to design and conduct experiments, as well as to analyze and interpret data</td>
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<td>(c) ability to design system, component, or process to meet needs within realistic constraints</td>
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<td>(d) ability to function on multidisciplinary teams</td>
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<tr>
<td>(e) ability to identify, formulate, and solve engineering problems</td>
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<td>(f) understanding of professional and ethical responsibility</td>
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<td>(g) ability to communicate effectively</td>
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<tr>
<td>(h) broad education necessary to understand the impact of engineering solutions</td>
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<tr>
<td>(i) recognition of the need for, and an ability to engage in lifelong learning</td>
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<td>(j) knowledge of contemporary issues</td>
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<tr>
<td>(k) ability to use techniques, skills, and modern engineering tools necessary for engineering practice</td>
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<tr>
<td>Additional outcomes articulated by the program</td>
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</table>
4. CONTINUOUS IMPROVEMENT

<p>| | | | |</p>
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<tbody>
<tr>
<td>Regular use of appropriate, documented processes for assessing</td>
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<tr>
<td>and evaluating the extent to which the student outcomes are</td>
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<tr>
<td>being attained</td>
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<tr>
<td>Results of evaluations systematically utilized as input for the</td>
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<tr>
<td>continuous improvement of the program</td>
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<tr>
<td>Other information, if available, used to assist in continuous</td>
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<tr>
<td>improvement</td>
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<td>5. CURRICULUM</td>
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<tr>
<td>Devotes adequate attention and time to each component, consistent with the outcomes and objectives of the program and institution</td>
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<tr>
<td>One year of college level mathematics and basic (biological, chemical, and physical sciences; some with experimental experience) sciences</td>
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<tr>
<td>One and one-half years of engineering topics appropriate to the field of study (see criterion statement)</td>
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<tr>
<td>General education component that complements the technical content and is consistent with program and institution objectives</td>
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<tr>
<td>Culminates in a major design experience based on knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints</td>
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<tr>
<td>6. FACULTY</td>
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<tr>
<td><strong>Sufficient number and competencies to cover all curricular areas</strong></td>
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<tr>
<td>Adequate levels of student-faculty interaction</td>
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<td>Adequate levels of student advising and counseling</td>
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<tr>
<td>Adequate levels of university service activities</td>
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<tr>
<td>Adequate levels of professional development</td>
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<tr>
<td>Adequate levels of interaction with practitioners and employers</td>
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<tr>
<td>Appropriate qualifications</td>
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<tr>
<td>Sufficient authority for program guidance and implementation of processes for evaluation, assessment, and continuous improvement</td>
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<tr>
<td>Overall competence (see criterion statement)</td>
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</tbody>
</table>
7. **FACILITIES**

<table>
<thead>
<tr>
<th>Adequate to support attainment of student outcomes and provide an atmosphere conducive to learning: classrooms, offices, laboratories, associated equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modern tools, equipment, computing resources, and laboratories are available, accessible, and systematically maintained and upgraded</td>
</tr>
<tr>
<td>Students provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories</td>
</tr>
<tr>
<td>Adequate library services and computing and information infrastructure</td>
</tr>
</tbody>
</table>
8. INSTITUTIONAL SUPPORT

| Institutional support and leadership adequate to ensure the quality and continuity of the program |
| Institutional services, financial support, and staff adequate to meet program needs |
| Sufficient to attract and retain, and provide for the continued professional development of a qualified faculty |
| Sufficient to acquire, maintain, and operate infrastructure, facilities, and equipment |
| Sufficient to provide an environment to attain student outcomes |

PROGRAM CRITERIA (FROM LEAS SOCIETY)

| Curricular topics (if any) |
| Faculty qualifications (if any) |
| Other (if any): |

ACCREDITATION POLICY AND PROCEDURE MANUAL

| II.A. Public release of information by the institution or program |
| II.E.4 Program names must meet ABET requirements |
| II.G.6.b.(1) Facilities adequate and safe for the intended purpose |
Fast Facts

- About one-quarter of incoming students to these institutions are fully prepared for college-level studies. The remaining 75% need remedial work in English, mathematics, or both. (highereducation.org)
- About 1 out of 5 incoming freshmen of a 4 year college need remedial math. (www.insidehighered.com)
- 1 out of 4 of our 2014 freshmen needed remedial math.
Fast Facts

- 58 percent of students who do not require remediation earn a bachelor’s degree, compared to only 17 percent of students enrolled in remedial reading and 27 percent of students enrolled in remedial math. (ncsl.org)
- 70% of the students taking math 80 passed in Fall 2014 semester. The retention rate of math 80 students are not significantly different from the general retention rate, statistically speaking.
Fast Facts

- Material taught in the class is 7th to 8th grade algebra.
- The first class deals with adding and subtracting integers.
- Some students have learning disabilities.
**Blooms Taxonomy**

**Knowledge**
- Recall of information;
- Discovery; Observation;
- Listing; Locating; Naming

**Comprehension**
- Understanding; Translating;
- Summarising; Demonstrating;
- Discussing

**Application**
- Using and applying knowledge;
- Using problem solving methods;
- Manipulating; Designing; Experimenting

**Analysis**
- Identifying and analyzing patterns;
- Organisation of ideas;
- Recognizing trends

**Synthesis**
- Using old concepts to create new ideas;
- Design and Invention; Composing; Imagining;
- Inferring; Modifying; Predicting; Combining

**Evaluation**
- Assessing theories; Comparison of ideas;
- Evaluating outcomes; Solving; Judging;
- Recommending; Rating
Helpful Tools

- WeBWork
- 100worksheets.com

One Hundred Worksheets

How do you do well in math? Just work hard.

This is a simple web page with a simple goal. Provide 100 worksheets for each problem type.

Hi, I am Daniel An, a math professor at SUNY Maritime College. On this website you will find a bunch of math worksheets, in pdf files of 100 pages each. The worksheets are aimed at practicing problems in basic algebra and precalculus. Do you have to do all 100 pages for each question? No. Just practice until you feel like you have mastered it. (Save trees - print only those pages you will work on.)
Multiple-choice math placement exam (part I 30 points)

- 65 students have both data
- 3 people scored worse by a point
- 1 person scored exactly same
- Remaining 61 students improved.
- Average score before the course was 13.4 and average score after the course was 19.4, a 43% increase. In terms of percentages, the average went from 44.7% to 63.7%
Students that took the placement exam twice

- 79 students took the placement exam again
- 34 people scored worse by a point
- 4 person scored exactly same
- Remaining 41 students improved.
- Average score in the first exam was 16.8 and average score after the course was 17.3, a 3% increase.