

DAU to Offer New Program Management Office Course (PMOC)

DoD Level III Program Management Certification Enters the 21st Century

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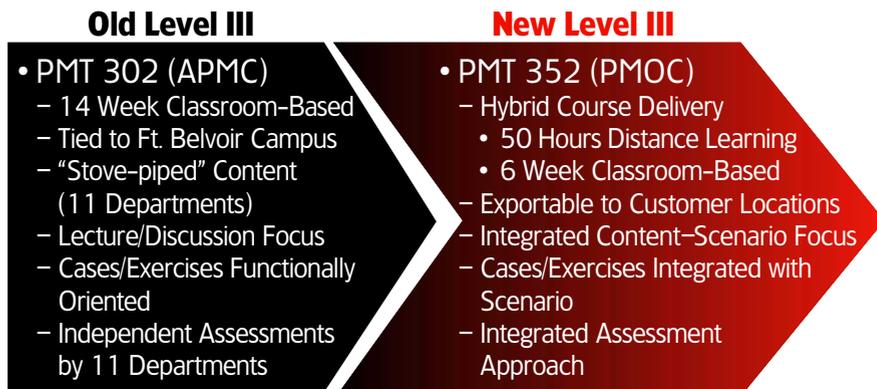
Students who attended the Defense Systems Management College to complete the 20-week Program Management Course (PMC) can readily recall both the hard work required of the course and the comradery with their classmates. They fondly remember building the wooden mousetrap vehicle, striving to meet both the technical and performance requirements of the runoff.

When the course was reduced to 14 weeks and renamed the Advanced Program Management Course, or APMC (Figure 1), students moved from building the old mousetrap vehicles to building a prototype of an Unmanned Ground Vehicle (UGV) using Lego Mindstorms.™ The course required students to design, build, and program the software for the Lego Mindstorms' vehicle so that it could successfully negotiate through a difficult obstacle course.

A New Beginning

Beginning in 2002, students will complete the Program Management Office Course (PMOC) using an advanced version of Lego Mindstorms to design the UGV online, build it, and then test it on a simulated battlefield. The course number is Program Management Training (PMT-352). This is part of DAU President Frank Anderson's Fast-Track Initiatives, specifically, "Revision of PM Training Curriculum," first published in October 2000.

FIGURE 1. DAWIA Certification—Old Level III vs. New Level III



Defense Acquisition University, assisted by Accenture, is working to incorporate computer-aided design technology, simulation-based trade-off software, and risk analysis programs into Lego Mindstorms.

Figure 2 represents the Joint Reconnaissance and Autonomous Targeting System (JRATS), which is a system of systems used throughout the course to

emphasize interoperability and information superiority.

JRATS involves UGV alternatives, an Unmanned Aerial Vehicle (UAV) called “Firebird,” and a Joint Command and Control System (JCCS).

Hold on to your joystick because the virtual battlefield is only one aspect of this newly structured course. DAU has taken

FIGURE 2. Joint Reconnaissance and Autonomous Targeting System (JRATS)



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great care to design PMT-352 (PMOC) with the student in mind (Figure 3).

Hybrid Course Design

PMT-352 (New Level III, Figure 1) is the final required course for over 90 percent of personnel in the Program Management Career Field.

The new course better meets the needs of the student while producing more effective Level III PM career field professionals. Graduates will be able to capably serve as senior Program Management Office (PMO) Integrated Product Team (IPT) leaders and members.

The PMT-352 course design team conducted field-level assessments at locations with high concentrations of Acquisition, Technology, and Logistics (AT&L) personnel. Data gathered during the field assessments shaped both the mix and duration of Distance Learning (DL) and classroom learning for the course. These assessments reported that field personnel like the freedom of DL, but believe that face-to-face teaming is required for the intricate nature of the course exercises.

The information gathered from the field assessments—along with the course performance outcomes, student responsibilities, and the DoD culture—resulted in the hybrid course design concept,

Over 700 students are expected to complete PMT-352 each year. The student pilot will be conducted in January 2002, with the first course offering scheduled for June 2002.

blending the appropriate mix of DL and classroom instruction.

Web-Based Training

If you've ever taken a DL course and found yourself yawning through each page of material, you are in for a pleasant awakening. PMT-352 delivers its online content via exciting interactions and activities to keep you engaged.

PMT-352 begins with 50 hours of Web-based DL that students complete over a 60-day period. The 60-day period allows maximum flexibility for students to complete the material at their own pace, wherever and whenever they wish.

Ten modules of work are completed during this 60-day period.

At the beginning of each of the 10 modules, your online supervisor assigns specific activities and tasks to complete. To add reality to the assignment, as you complete your work your online supervisor offers advice and feedback—whether you want it or not—much like your real-life supervisor.

The DL portion of the course is designed using Goal-Based learning theory. This is not read-and-remember type training. Rather, it is hands-on, scenario-driven learning that uses real-world situations. Each module drops the student into a specific acquisition program with unique factors and presents activities that simulate program acquisition challenges. In completing an activity, students perform tasks as they would in their actual work environment.

Each module is stand-alone, requiring students to critically think and assess the details of each scenario for the appropriate answers. An additional benefit of stand-alone module design is that students can complete the modules in any order.

Estimated completion times are provided for each module so that students who have a two-hour window on a

FIGURE 3. PMT-352 Course Structure

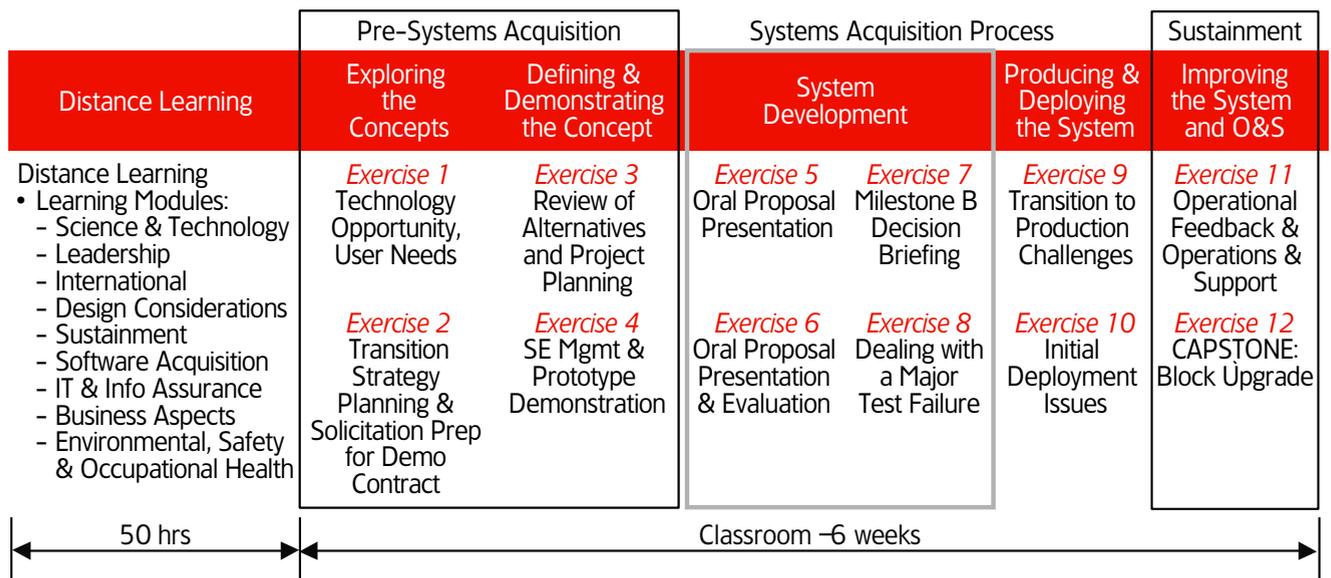
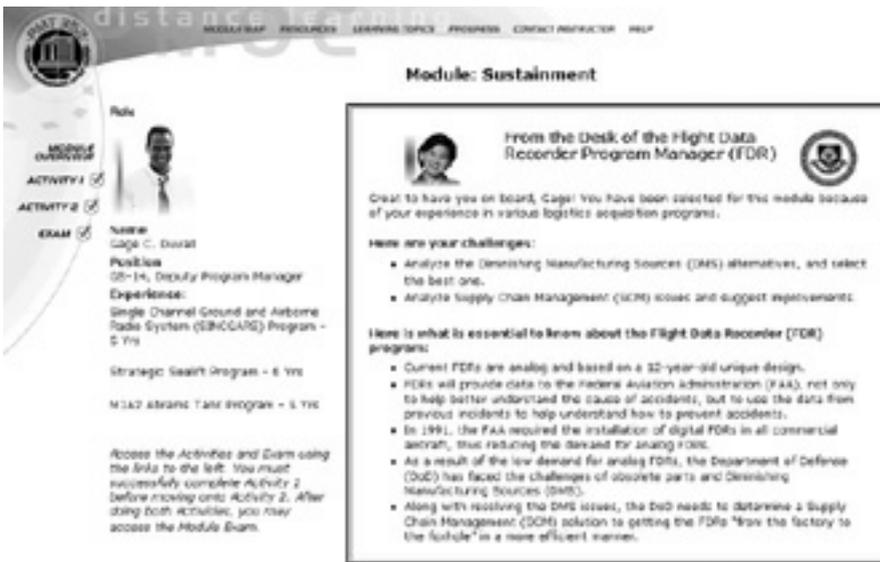


FIGURE 4. Example of Online Course Module



given day can select a module that fits into their schedule.

DAU also benefits from stand-alone modular design because the material may be easily moved to other courses or to DAU's online Continuous Learning Center (<http://clc.dau.mil>).

Online Resources

To help students complete modules, the DL contains a resource layer (labeled "Resources") comprised of Web links, online handbooks, links to prior courses, and other supporting information (Figure 4).

A number of custom learning topics (reference aids), each covering a single area or subject, is also available (Figure 5). While working on an activity, students can consult the resource layer to complete their tasks.

Once the course is over, students will have access to this resource layer when they return to work. This provides information from the course where and when students need it most. Access to course material on the job supports DAU's goal of providing real-time information and performance support to students at point of need.

Classroom Training

Upon successful completion of all 10 DL modules, students attend six weeks of team-based exercises in the classroom

Ground Vehicle (JUGV) alternatives, the "Firebird" UAV, and a JCCS.

Each student is assigned a role on the team, and roles change for each exercise. Each student has at least two opportunities to perform as the IPT Leader.

Roles vary depending on the performance objectives of the exercise. Another unique aspect of the course is that students also get to perform as defense contractors while they build the JUGV prototype alternative to government specifications, develop a proposal, and then pitch their proposal during an oral presentation.

In role-playing both a government program manager and defense contractor, students not only acquire the knowledge, skills, and capabilities necessary to execute program management tasks, but they also gain valuable insight from a contractor's perspective regarding systems acquisition.

Throughout the classroom exercises, much like the DL portion of the course Goal-Based learning theory is used as the learning approach. Goal-Based learning operates on the principle that students learn best through experience and mistakes while trying to reach a certain goal.

Another key point is that the exercises are fully integrated.

Each exercise is two to three days in length, covering several functional areas. This is in contrast to the current "stove-

(Figure 6). This classroom portion of the course is designed to be exportable so that students can take the course at any of the DAU campuses. The course will eventually be offered at other locations based on student demand.

Real-World Scenario

Once in the classroom, each student is issued a notebook computer to use throughout the six weeks. Students are divided into PMO Integrated Product Teams with six members on each team. Twelve exercises must be completed by the team to successfully pass the course. A single scenario, based on the JRATS, is used for all exercises.

The JRATS scenario and exercises mirror events in the Systems Acquisition Life Cycle. JRATS, which is a system of systems, includes Joint Unmanned

FIGURE 5. Example of Online Activity with Learning Topics



piped” course—PMT-302—where functional areas are taught separately.

Multi-faceted Assessment

Assessment is another area where PMT-352 is leading the way. Instead of simply distributing a pencil and paper test at the end of the course, the PMT-352 assessment approach is multi-faceted.

Prior to beginning the course, students undergo a body of knowledge review and pre-course assessment. The body of knowledge review is a non-graded self-assessment that helps students identify prerequisite material that needs to be reviewed from ACQ-101, ACQ-201, and PMT-250 prior to starting the PMT-352 course.

The body of knowledge assessment is not graded. It is simply a means of ensuring all students have a similar baseline of knowledge when they start the course.

The pre-course assessment and subsequent post-course assessment determine the student’s comprehension of the material from the beginning of the course to the completion of the course. Pre- and post-testing also helps DAU evaluate the overall effectiveness of the course. This assessment includes material that will be covered in PMT-352.

During the DL portion of the course, students answer questions while they complete the work as part of each module’s activities and tasks. Additionally, 10 online exams—one at the end of each module—assess whether the student met the learning objectives of the module.

The field-level analysis, conducted during the course design phase, revealed that former students and supervisors were adamant about making the new course more rigorous. Supervisors reported that there were far too many Level III program management personnel who did not possess the necessary skills to be successful in the positions they will be filling.

PMT-352 students must complete all DL exams with 100 percent accuracy be-

FIGURE 6. PMOC Team-Based Classroom Exercises



fore being eligible to proceed to the classroom portion of the course. They have three tries to reach the 100 percent requirement.

When students reach the classroom, they are granted access to an online assessment tool that helps them track their progress throughout the course. Clear expectations for success (at least 800 out of 1000 possible points) are outlined so that students know exactly where they stand at any given point in time during the course.

Classroom assessments (Figure 7) include testing students’ analysis and evaluation skills at predetermined times during the scenario, along with team briefings at the completion of each exercise. The briefings are evaluated from both a leadership contribution level and from a team perspective.

Do all deliverables and briefings meet the established criteria for quality and completeness? Were all individual work products incorporated into the team solution? Is the team able to effectively

FIGURE 7. Example of Online Classroom Assessment Tool

Exercise	Date	Earned Points	Possible Points
Exercise 1	06-30-2001	7	10
Exercise 2	06-30-2001	10	10
Exercise 3	06-30-2001	10	10
Exercise 4	06-30-2001	8	10
Exercise 5	06-30-2001	12	15
Exercise 6	06-30-2001	15	15
Exercise 7	06-30-2001	15	15
Exercise 8	06-30-2001	15	15
Exercise 9			25
Exercise 10			25
Exercise 11			25
Exercise 12			25

Exercise	Date	Earned Points	Possible Points
Exercise 2	06-30-2001	140	150

defend its position? Were the team dynamics effective in reaching the solution?

Students must maintain a score of 80 percent (or 800 out of 1,000 points) to pass the course. The online assessment tool enables students to continuously monitor their progress and adjust their work accordingly. The responsibility of meeting course requirements is clearly placed on the student.

Peer-to-Peer Assessment

In addition to assessments that evaluate knowledge gained and hands-on performance, non-graded upward feedback forms are completed by team members regarding the effectiveness, capabilities, and decision-making abilities of the team leader.

Likewise, student IPT Leaders complete downward feedback forms regarding performance and contributions of their team members.

This feedback information is critical to personal development. However, because of confidentiality, the information is compiled and summarized along with instructor feedback and provided after the completion of the course.

Six months after completing the course, students complete a follow-up assessment to determine if knowledge transfer occurred from the course to the job. How much of what was

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learned in the course is relevant and useful in real life? This information helps keep the course up to date with the rapidly changing needs of the acquisition workforce.

Who Should Attend

The target audience for PMT-352 is civilian (GS 13-14) and military (O4-O5).

Successful completion of the course meets the training requirements for DAWIA Level III PM Certification (Figure 8).

Over 700 students are expected to complete PMT-352 each year. The student pilot will be conducted in January 2002, with the first course offering scheduled for June 2002.

The course requires participants to apply critical thinking, problem solving, leadership, and management skills throughout the course.

The online simulation and interactive DL with real-time feedback improves student engagement. The hands-on prototype building and goal-based scenario in the classroom increase both comprehension and retention.

PMT-352 introduces a new level of Program Management training that is both comprehensive and fun. But don't rely solely on our admittedly biased advocacy. Browse our Web site at <http://www.dau.mil> and learn how a DAU acquisition education can enhance your acquisition career. Plan now to register, and then simply *enjoy* what we believe is a truly unique learning experience.

Editor's Note. The authors welcome questions or comments on this article. Contact Bloom at kenneth.bloom@dau.mil or Bahnmaier at bill.bahnmaier@dau.mil.

FIGURE 8. Program Management Career Track

