HENRIETTA, N.Y. -- John Phillips has some daunting assignments for seniors at the Rochester Institute of Technology.

To graduate, some of them will tackle any of a half-dozen science projects he's dreamed up at RIT's request. For instance: how to identify a terrorist in disguise based on bone structure, and how to bend light rays to keep a spy in the shadows.

"Make me invisible," the 6-foot-3, 250-pound Mr. Phillips exhorted researchers during an August visit to the 15,300-student university in this Rochester suburb.

Mr. Phillips takes more than an academic interest in these questions. As chief scientist for the Central Intelligence Agency, he's looking for creative ways -- and minds -- to protect American operatives and track down enemies.

In recent years, RIT has been unfriendly territory for the CIA. The agency was nearly invisible here after a 1991 scandal over its influence on research and curriculum led to the resignation of the school's president, who had for a time concealed his own work for the agency. But now the school and the espionage agency are engaged in what one faculty member terms a "courtship dance" -- reflecting a rapprochement between the CIA and higher education nationally in recent years, and particularly since the Sept. 11 attacks.

The agency is feting scholars in key fields with the aim of recruiting their top students. Desperate to upgrade its technology and analysis after failing to anticipate the terrorist attacks, it's hiring more scholars as consultants and boosting funding for academic research in such fields as language-translation software, computer security and sensors that can detect chemicals, sounds or movement from a long distance.

Academia, long suspicious of the CIA, has been receptive -- for reasons of both patriotism and self-interest. At a time when American companies are cutting back on hiring and research support, universities are turning to the 13 federal intelligence agencies, including the CIA, to pick up the slack. "It's just amazing, the number of universities coming to us and saying, 'What can we do to help?'" says Mr. Phillips. He says one scientist now accepting CIA funding told him, "Before 9/11, I wouldn't have been seen in the same room with you."

Underscoring this newfound rapport, two state universities this year appointed presidents with links to the CIA. Texas A&M University named former CIA director Robert Gates. Arizona State chose Michael Crow, vice chairman of In-Q-Tel Inc., the nonprofit venture-capital arm of the CIA that funds companies developing spy technology.
About 30 academic political scientists and economists are now moonlighting with the intelligence community, plugging gaps left in its monitoring of global backwaters such as the Pacific Islands after agency analysts were transferred to the counterterrorism beat. The academics get paid for contributing to memos prepared for senior policy makers and for speaking at official seminars, among other things. A typical reservist might make $10,000 a year for such work.

"It would have been very difficult to have this program 10 years ago, during the Cold War, because there was much more of a rift between academia and government," says program coordinator Christopher Darlington. "Times have changed."

Since the CIA's founding in 1947, the agency's relationship with academe has waxed and waned. Ivy League faculty largely created the CIA's analytic branch, which studies other countries but isn't directly involved in spying on them. Then, in the Vietnam era, the agency became anathema on campus for its covert activities in Latin America and elsewhere. In the 1980s, it sought to re-establish ties, sponsoring as many as 75 academic conferences a year. After the Soviet Union collapsed, the agency closed its research-and-development office and cut back funding for academia.

Now, the funding taps have been turned on again. Since Sept. 11, Mr. Phillips says the budget of his Intelligence Technology Innovation Center has doubled, although the specific figures are classified. That has given the 56-year-old scientist a chance to convert his fantasies into reality.

In his office at CIA headquarters, Mr. Phillips looks through a magnifying glass at what he calls "the world's smallest robot," a miniature remote-controlled go-cart that's about the size of a nickel. "You could mount a camera on this," he suggests. "I'd like to drop this on Saddam Hussein, have it follow him around and tell you what he's doing."

Since fiscal 2000, Mr. Phillips's office has sponsored $2 million a year of unclassified research by postdoctoral fellows at Sandia National Laboratories, where the robot was developed, as well as 18 universities, including Harvard, Stanford, Carnegie Mellon, the University of Michigan and Louisiana State.

Mr. Phillips says he is particularly interested in fostering long-term relationships with young scientists, such as the post-doctoral fellows. "We don't want to turn them into spies," he says. "We want to capture them intellectually."

Of course, not everybody is eager to be captured, and there's a fair amount of dissent bubbling up at universities around the country. "There's kind of a very patriotic atmosphere that's un-self-critical and unreflective -- precisely the sort of environment in which you'd expect academics to drop whatever scruples they have," says David Gibbs, a University of Arizona political scientist and longtime CIA critic. "The idea that now we have to rely more on the CIA ignores the fact the CIA did so much to get us into this mess in the first place."

One arena of conflict is the CIA's practice of restricting research opportunities for international students. Since Sept. 11, several federal agencies including the CIA have increasingly insisted that only U.S. citizens can work on the research they fund, even if it is unclassified. The Massachusetts Institute of Technology and the University of California, among other schools, have balked, saying they will reject such contracts. They contend such rules discriminate against international students and relegate them to second-tier status.

Another stumbling block is the CIA's obsession with secrecy. Most prominent universities have banned secret research on campus as incompatible with academic values of openness and peer review. MIT recently reaffirmed its prohibition, in response to government efforts to limit open research for the sake of national security.
But more often than not these days, the agency gets a warmer reception than it once did. Last December, the National Science Foundation -- the federal sponsor of science research -- introduced Mr. Phillips’ staff to 40 top computer scientists. Fifteen of them have since accepted CIA funding totalling $8 million a year on top of their NSF grants.

Shortly after last year’s terrorist attacks, In-Q-Tel Inc., the CIA’s venture-capital arm, sponsored a brainstorming session in a New Jersey conference center between CIA researchers and another 70 academic computer scientists.

"The exchange was like, 'You guys in the agency ought to be aware that the leading edge of technology in this realm is about eight years ahead of where you thought it was,'” says Mr. Crow, the In-Q-Tel vice chairman, who was then an administrator at Columbia University and organized the gathering. "Notwithstanding what we may think about the agency, it's attempting to fulfill a mission."

Modeled after the collaboration in the early 1950s between the intelligence community and academia that spurred development of the U-2 spy plane, the conference has spawned half a dozen projects. For instance, Kathleen McKeown, chairwoman of computer science at Columbia University, says In-Q-Tel may fund her research into computer-generated summaries of foreign-language Internet text.

Since Sept. 11, the CIA has increased its hiring goals by 85%, and it's looking to colleges to replenish its ranks. The agency boasted the most popular booth at RIT’s annual job fair last October. Robert Rebelo, chief of the recruitment center, says he receives 2,000 to 3,000 resumes a week, about double what he was seeing before the terrorist attacks.

Most applicants who turn up at job fairs qualify only for entry-level jobs. To attract people with linguistic or technical expertise, the CIA is sending intelligence officers to lecture at professional schools such as Fletcher School of Law & Diplomacy at Tufts University. It is also encouraging key faculty to steer promising graduate students its way.

On Sept. 12, for instance, the agency hosted a lunch at a Tucson hotel for University of Arizona faculty members in specialties such as engineering, East Asian studies and Near Eastern studies. About 30 faculty members listened to agency recruiters outline the jobs and salaries available and the skills they’re looking for. People with advanced degrees and linguistic or technical expertise start off at $42,000 to $48,000 a year. Each professor was rewarded with a magnifying glass/paperweight that tells the time in cities around the world and is embossed with the CIA seal.

"We're reaching out to key departments and individuals," Mr. Rebelo says. "I've given standing orders to all my recruiters, if there's a university with a Middle East Studies program, you should begin to look into it, begin to develop relations with it. We have to debunk a lot of myths."

Faculty and students at the Rochester Institute of Technology have a higher stake in the debate than most, because this was the scene of one of the most controversial episodes of CIA influence on campus. With its emphasis on photography, a treasured tool of spycraft, RIT had long turned out students who made careers at the CIA. There are currently 75 alumni at the agency. In 1985, prodded by Robert J. Kohler, an RIT alumnus and then-CIA director of development and engineering, the agency agreed surreptitiously to underwrite an expansion of the school's imaging-science program. In return, the university pledged that curriculum would be "responsive" to the CIA.

The CIA funded 39 projects at the school's off-campus research corporation, including experiments with forging documents and planting bugs in woodwork. Students employed on the projects were often unaware of the CIA's sponsorship, and the projects were only sketchily disclosed. Two CIA
officers taught at RIT as visiting faculty and informally recruited students, according to a later investigation.

In February 1991, RIT President M. Richard Rose announced he was taking a four-month leave of absence for a confidential assignment. Two months later, he acknowledged he was actually developing educational strategies for the CIA. The Rochester Democrat and Chronicle then exposed the 1985 agreement and the school's other previously hidden links to the agency.

In the ensuing furor, most of the CIA projects were terminated. The university adopted policies requiring disclosure of all funding sources and research topics, as well as faculty review of visiting scholars. Its last CIA contract ran out two months ago.

The faculty voted no confidence in both Mr. Rose and Mr. Kohler, who had become a trustee in 1988. Mr. Rose quit, but Mr. Kohler stayed on the RIT board of trustees and pushed for restoring the CIA alliance. "I've been trying to get these guys back together for years," says Mr. Kohler, who heads the board's subcommittee on government relations.

Mr. Kohler's breakthrough was persuading CIA Director George J. Tenet, an old friend, to speak to the RIT board at a lunch in Washington in July 2001. After Sept. 11, RIT President Albert J. Simone and Mr. Kohler followed up. At their invitation, Mr. Tenet delivered the commencement address in May and was awarded an honorary degree over the opposition of liberal arts faculty.

The next step was Mr. Phillips's visit this summer. He outlined his research goals to faculty and administrators, and encouraged the university's National Technical Institute for the Deaf to apply its technology to helping the agency comprehend garbled radio transmissions. He was impressed to learn that an engineering professor, Raghuveer Rao, is already making strides on another problem of interest to the agency -- using imaging equipment to see through walls.

Physicist Ryne Raffaelle, who develops energy sources for small devices, is eager to power up Mr. Phillips's minirobot, despite worries that such technology could be misused someday -- say, to spy on Americans. "When our teachers made us read 'Brave New World' the Aldous Huxley novel that details a world of complete scientific control -- "they knew what they were doing," Prof. Raffaelle says. "But by and large, these CIA guys are people whose primary goal is to keep the rest of us safe."

Most students and faculty endorse Mr. Simone's overtures. Still, critics say Mr. Simone is too quick to compromise -- and forget history. "It is inevitable that the educational process is going to be corrupted," says Monroe H. Freedman, a Hofstra University law professor who was called in to investigate the 1991 controversy for RIT. Wade Robison, an RIT professor of applied ethics, says, "I don't want a relationship such that, when people think RIT, they instantly think CIA."

For RIT, troubled by the sinking economy, a reconciliation is financially tempting. RIT has a $451 million endowment but is worried about the struggles of longtime patrons Xerox Corp. and Eastman Kodak Co. The CIA offers a chance to diversify. President Simone envisions a full-fledged "partnership," including CIA-endowed professorships and scholarships, courses and training for CIA officers, faculty sabbaticals at CIA headquarters in Langley, Va., and collaborations on classified and unclassified research. He anticipates that "two or three dozen faculty" would work on CIA contracts, and the agency would have input into senior projects and graduate theses.

Mr. Simone, an economist, contends that academia and the intelligence community need to join forces now as they did during World War II. During this national crisis, he says, concerns about academic freedom and civil liberties should be secondary. "We may have to suspend some
freedoms for a little while," he says. "I'm less afraid of losing freedoms due to loss of democracy than of losing freedoms because we're all dead due to terrorist attacks."

He even says he doesn't have a problem with secret research on campus, if it's the most convenient site. Mr. Simone argues that even unclassified research is often closely guarded, and calls the very concept of an open university a "nice fiction."