Computational Science Minor
Annual Report
Academic Year 2009-2010 and Academic Year 2010-2011

1. Executive Summary (1 page max)
Students in the Computational Science Minor take various computational courses and then apply their knowledge in a research project. Required courses are

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math A211</td>
<td>Intro to Programming I</td>
<td>3</td>
</tr>
<tr>
<td>Math A257</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>Math A271</td>
<td>Applied Scientific Computing</td>
<td>3</td>
</tr>
<tr>
<td>Math A375</td>
<td>Numerical Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

Students then take other courses and perform at least 2 hours of undergraduate research, culminating in a written paper. The other courses together with the research total at least 8 hours credit. Students can write on any topic as long as the research is computationally based. Students and faculty can design their own curriculum. Some options are

**Option I**
- Math A258 Calculus II
- Math A212 Intro to Programming II
- Research

**Option 2**
- Math A258 Calculus II
- Research

**Option 3**
- Statistics of program
- Research
- EITHER Math A212 Intro to Programming II
- OR Further research

**Option 4**
- Statistics of program
- Math A212 Introduction to Programming II
- Research

**Option 5**
- Math A212 Introduction to Programming II
- Research

Research topics so far have been in Chemistry, Economics, and Physics.

The program is housed within the Department of Mathematical Sciences and is monitored by a Computational Science committee. This committee has representatives from Biology, Business, Chemistry, Mathematical Sciences, Physics, and Psychology.
2. Unit Identification or Profile Summary (1 page max)

2.1 Official name of the unit and the mission or purpose statement of the unit

NAME Computational Science Minor
MISSION Computational Science is an interdisciplinary field of study at the intersection of applied mathematics, statistics, and the natural, cognitive, social and managerial sciences. The study of Computational Science provides a critical connection between mathematics and science and exposes our students to modern computational techniques used to apply models and extract information from data. The Computational Sciences Minor at Loyola University New Orleans offers our students the opportunity to learn the latest computational techniques while working on undergraduate research under the supervision of a faculty mentor, thus preparing students for a career in science.

2.2 General statement and descriptive information concerning the unit

This program brings together faculty and students in the Sciences, in Mathematics, and in other disciplines. Student use Mathematics, Statistics, and Programming to do undergraduate research in their disciplines.

2.2.1 Headcounts of full-time and part-time staff

The Department of Mathematical Sciences has one full-time staff member.

2.2.2 Headcounts of faculty (if appropriate): tenured, tenure track, full-time extraordinary, and part-time adjunct.

Faculty in any department can mentor undergraduate research projects. So far, faculty who have mentored undergraduate research projects in our program are:

<table>
<thead>
<tr>
<th>Tenured</th>
<th>Dr. Thomas Spence</th>
<th>Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drs. Maria Calzada and Xuefeng Li</td>
<td>Mathematical Sciences</td>
</tr>
<tr>
<td></td>
<td>Dr. Armin Kargol</td>
<td>Physics</td>
</tr>
<tr>
<td>Non-tenured</td>
<td>Dr. John Levendis</td>
<td>Business</td>
</tr>
<tr>
<td></td>
<td>Dr. Joelle Underwood</td>
<td>Chemistry</td>
</tr>
</tbody>
</table>

Drs. Calzada, Kargol, Spence, Levendis, and Underwood mentored student research projects. Drs. Calzada and Spence also taught Math A271. Dr. Li taught Math A375.

2.2.3 Headcounts of full-time and part-time undergraduate students (if appropriate)

<table>
<thead>
<tr>
<th>Academic year</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-2010</td>
<td>4</td>
</tr>
<tr>
<td>2010-2011</td>
<td>7</td>
</tr>
</tbody>
</table>

2.2.4 Headcounts of full-time and part-time graduate students

None

2.2.5 Retention rates of full-time degree-seeking students by program: fall to fall and fall to spring

100%

2.2.6 Graduation rates for entering students by cohort year by program

100%
3 Assessment of previous year's goals

3.1 General statement on how assessment is conducted within the unit (The unit’s assessment plan should be posted to its Intranet site)

We have four criteria which we use to conduct assessment. These criteria are in the protocol of our program; the protocol is posted in our Intranet site.

1. Recruitment and retention of students.

2. Peer evaluation of course materials.

3. Committee evaluation of computational science research projects.

4. Success of our graduates in graduate school and in the work force.

3.2 Outline the unit's program goals for the previous year (include how these goals are strategic to both the unit’s and the university’s mission; these should be based on the unit’s strategic plan)

Since the program started in Academic Year 2009-2010, our goal was simply to recruit and retain students. We have been successful in that goal.

3.3 Outline the unit's student learning outcomes for the previous year

In Academic Year 2009-2010, all four students in the program completed their research projects and graduated. In Academic Year 2010-2011, two students out of seven in the program completed their research projects and graduated.

3.4 Description of the previous year’s assessment activities, both of internal (within Loyola) and external (outside Loyola) factors affecting the unit

The Computational Science committee has held meetings twice per semester to discuss concerns germane to the program. During these meetings we monitored the criteria listed in 3.1. Also, each faculty member who mentored an undergraduate research project was required to submit a research proposal for approval by the committee.

3.5 Describe the assessment of community-based learning, community-engaged activities, or community-related goals (if applicable)  Not applicable.

3.6 Briefly describe the results found through the assessment of the previous year’s program goals, student learning outcomes, and any community-related goals

The program has been successful according to our criteria.

1. Recruitment and retention of students.

   We have recruited a total of 11 students over the last two years. Four graduated in 2010 and two will graduate in 2011. Our retention rate has been 100%.
2. Peer evaluation of course materials.

All faculty have attended professional conferences and seminars in areas of their professional interest. In addition, Drs. Calzada, Spence, and Tucci attended the SCALA conference in Computational Science at Tulane in January 2011.

In Academic Year 2009-2010 we established two labs for our students. The first is a Virtual Lab which is accessible online. To access this lab students download client software to their laptop or personal computer; client software and installation instructions are available at http://vlab.loyno.edu. During Academic Year 2009-2010 we held discussions with students and faculty as to the effectiveness of the lab. As a result of these discussions, IT agreed to provide a number of thin clients to the lab to improve accessibility. Also, as a result of these discussions, members of the Department of Mathematical Sciences wrote a grant which was submitted to the Louisiana Board of Regents. Principal Investigators on the grant are Drs. Maria Calzada, Xuefeng Li, Ana Maria Matei, Jeremy Thibodeaux, and Ralph Tucci of the Department of Mathematical Sciences, and Mr. Bret Jacobs, Director of IT. The grant provides Microsoft Office, SPSS, Scientific Notebook, Matlab and Labview for the Virtual Lab. The grant was funded for $46,374. The lab also provides Visual Basic, which is free.

In Academic Year 2009-2010 we established a Computational Science Lab in Mo 564 for the use of students in our Computational Science minor as well as for students majoring in Computational Mathematics. This lab currently has two Dell Precision T3500 workstations running Windows 7. Both machines are loaded with Matlab; both machines are configured to access the Virtual Lab. We have plans to increase the number of workstations in the next academic year.

3. Committee evaluation of computational science research projects.

The committee reviews research proposals and provides feedback to faculty mentors to assure continuous improvement of the program. Student research projects were presented at the President's Open House in April 2011.

4. Success of our graduates in graduate school and in the work force.

Discussions with students who have graduated and with faculty mentors indicates that students have benefited from the Computational Science minor. In particular, Hunter Fontenot, who graduated with a degree in Chemistry in 2010, told the committee that the Computational Science minor provided him with skills which he found useful in his career after Loyola. Holly Gardner, who graduated with a degree in Physics in 2011, has been accepted as a graduate student in the Computational Science program at George Mason University. She will also participate in the 2011 Program for Women in Mathematics at Princeton University’s Institute for Advanced Studies in its School of Mathematics.
4 Summary of Previous Year's Achievements (1 page max)

4.1 Unit as a whole 3.3.1/3.3.1.2
In Academic Year 2009-2010 we graduated 4 students out of 4.
In Academic Year 2010-2011 we graduated 2 students out of 7.

4.2 Faculty achievements/service (if appropriate) 3.3.1/3.3.1.2

Talks and Conference Presentations
Six

Publications
Fourteen

Mentoring of Student Research for the Computational Science Minor
Six research projects were completed.

Mentoring of Other Undergraduate Research Projects
Eight other undergraduate research projects were completed.

4.3 Staff achievements/service 3.3.1/3.3.1.2
Not applicable

4.4 Student achievements (if appropriate) 3.3.1/3.3.1.2
Six students completed the undergraduate research which is required to complete the requirements for the Computational Science minor. All these research papers were presented at the President's Open House in Spring 2011.

Several students have given talks at conferences at the local and national level.

Anecdotal evidence indicates that students who completed the program and graduated in Spring 2010 have benefited from the program.

In Spring 2011 Holly Gardner was awarded the first award for Best Research in Computational Science, Spring 2011. She was accepted into the Computational Science program at George Mason University. She will also participate in the 2011 Program for Women in Mathematics at Princeton University’s Institute for Advanced Studies in its School of Mathematics.

4.5 Community engagement achievements (if appropriate)  Not applicable
5 Budget for previous year and upcoming year's goals

5.1 Previous FY salary, operating, and total budgets.
$1,350 for academic year 2010-2011.

5.1.1 Previous FY budget discussion (Provide a narrative of the previous year's budget and spending, including an assessment of the adequacy of the budget to 1) support and operate the unit and 2) support the unit's strategic goals.)
There was no discussion in FY 2009-2010 since we had no budget. We currently have two budget items:
- A book awarded to the student with the best research.
- Software and hardware purchases, consisting of equipment to be used in Math A271 and also of statistical software.

5.2 Upcoming FY salary, operating and total budgets. Provide expected budget if the unit’s budget hasn't been finalized.
Salaries are handled within individual departments. Budget for academic year 2011-2012 is being decided.

5.2.1 Upcoming FY budget discussion (Provide a narrative of the upcoming year's budget and expected spending, including an assessment of the adequacy of the budget to 1) support and operate the unit and 2) support the unit's strategic goals.)
Our budget for Academic Year 2010-2011 is $1,350. We have purchased a modest amount of software and hardware this fiscal year. We do not yet have next year's budget. When we do, we will use that money to purchase more hardware and software for the Virtual Lab and the Computational Science Lab.
6. Planning and goals for the upcoming year (2 pages max)

6.1 General statement describing the process of strategic planning in the unit and how the strategic plan has informed the development of the upcoming year's goals. (The current strategic plan should be posted on the unit’s Intranet site.)

The strategic plan consists of carrying out the following activities.

- **GOAL 1** Recruit and retain students.
- **GOAL 2** Acquire software and hardware.
- **GOAL 3** Mentor students in undergraduate research.
- **GOAL 4** Enhance collaboration across colleges and across disciplines.

Planning is done at the meetings of the Computational Science Committee, which are held twice each semester.

**GOAL 1** We have been successful in our recruitment efforts. The number of students went from 4 in the first year of the program to 7 in the second year. We will continue our recruitment efforts.

**GOAL 2** Members of the Department of Mathematical Science wrote a grant for $46,374., which was funded. This allows us to expand the offerings in the Virtual Lab and the Computational Science Lab. We also purchased equipment and software from our budget for this academic year; please see 3.6.2 and 5.1.1.

**GOAL 3** Over the past two years, six students have successfully completed undergraduate research projects.

**GOAL 4** We have collaborated across several disciplines. Students have taken courses in Mathematical Sciences and completed undergraduate research projects in Business, Chemistry, and Physics.

6.2 Describe how the unit’s strategic plan supports the mission or strategic goals of the university.

The unit's strategic plan supports the following goals of the University's strategic plan.

- **Support student retention.** The retention rate in our program is 100%.
- **Enhance reputation and stature of the University.** We post our undergraduate research projects online. Many of our students have given talks at local and national meetings.
- **Employ innovative technology.** Our students use software and the latest lab equipment in our courses and in their undergraduate research projects.
- **Support undergraduate research and faculty-student collaboration across colleges and across disciplines.** This activity is at the heart of our program.
- **Enhance existing distinctive programs and those which demonstrate unique market advantages; develop new programs and strengthen existing programs that**
are distinctive in subject matter and that are cross-disciplinary, interdepartmental, and inter-college programs . . . and house interdisciplinary studies and other cross-college programs in a centralized location. Our program is interdisciplinary, which means that it strengthens individual disciplines. The program also puts us on the cutting edge of modern scientific thought, since interdisciplinary programs are becoming prevalent across the nation. The program is housed centrally in the Department of Mathematical Sciences.

6.3 Describe the program goals for the upcoming year. (Indicate how assessment during the previous year has been used to inform the development of the upcoming year's goals.)

The program goals are the same as those for the previous year; please see 6.1. We have been successful in reaching our goals in the first two years of the program. We will continue to recruit students and to acquire hardware and software.

6.4 Describe the student learning outcomes for the upcoming year. (Indicate how assessment during the previous year has been used to inform the development of the upcoming year's goals.)

Learning outcomes are determined by undergraduate research projects. So far 6 students have completed their undergraduate research projects. They have presented these projects locally and nationally.

6.5 Description of planned involvement of non-Loyola community in strategic goals or the activities planned to achieve those goals, such as community-based learning, community-engaged activities, or community-related goals (if applicable).

Not applicable.

6.6 Description of the resources that will support the goals for the upcoming year.

We will use the Virtual Lab, the Computational Science Lab, and equipment purchased through our budget. Please see 3.6.2 and 5.1.1.

6.7 Assessment plan for upcoming year's goals.

We will continue to meet twice per semester to assess our program.
7. Appendices

7.1 Data collection tools for student data (Provide a copy of any tools that the unit uses to collect data about student achievement, such as senior exit exams, student learning outcome rubrics for courses, interview protocols for graduating seniors, etc.)
Our assessment tool is the undergraduate research project.

7.2 Data collection tools for other data (Provide a copy of any other tools the unit might use to collect data not listed in 7.1)
None.

7.3 Assessment reports (At the unit’s discretion, provide a copy of any assessment reports that the unit has generated as a result of the previous year’s assessment activities)
None.

7.4 Any supporting documentation the unit sees fit to include in the annual report
The minutes of our meetings document our planning activities. Selected minutes are attached.
Computational Science Committee
Minutes
October 13, 2009

The meeting was called to order at 2:00 PM, October 13, in Mo 540.

Present Mary Brazier, Armin Kargol, Michael Kelly, Xuefeng Li, Martin McHugh, Thom Spence, Ralph Tucci

I Old Business

A The protocol
This was approved with changes. (Please see attached.)

II New Business

A Computational Minor Project Proposal form
This was approved with changes. (Please see attached.) For those of you who have already started a project with a student, please fill in this form and send me a copy. Please recall that the committee needs to approve all projects.

B Meeting schedule
This is to be determined. We will have at least one more meeting this semester.

C Other business

A research proposal was approved. Ms. Holly Gardner will work with Dr. Maria Calzada on “A Bootstrap Test for Normality”.

Each of Biology, Chemistry, Mathematics and Computer Science, Physics, and Psychology needs to select a member to the committee.

The meeting was adjourned at 3:00 PM.
Computational Science Minor
Annual Report
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Computational Science Committee
Minutes
April 29, 2010

Present were Dr. Hood from Biology, Dr. Levendis from Business, Dr. Spence from Chemistry, Drs. Kelly and Tucci from Mathematical Sciences, Dr. McHugh from Physics, and Dr. Dupuis from Psychology.

The meeting was called to order at 9:00 AM.

The minutes of October 9, 2009 were approved.

I Several announcements were made.

(1) The Interdisciplinary Minors had a meeting in the Spring to discuss common interests. The brochures were refined. Budgets were anticipated for the coming year. Meetings were to be held regularly.

(2) It was announced that research proposals for Hunter Fontenot, Anna Lee, Alex Girau, and Mark Melancon had been approved.

(3) Discussion was held on providing copies of MatLab for students.

(4) A Virtual Lab was set up for the students.

(5) Members of the committee were asked to make software requests of IT as soon as possible.

(6) The Department of Mathematical Sciences had reserved space for a Computational Science Lab to be used by students in the program.

II Old Business

None

II New business

A Computational Minor Science Award
Discussion was held on offering this award. It was decided to postpone a decision until the number of students increases.

B Size of the student projects
It was suggested that the student projects should produce a paper which is at least 5 pages long per credit hour.

C Symbolic Logic
The Philosophy Department was planning to teach Symbolic Logic, and they wanted us to count this toward the Computational Science Minor. After some discussion, the committee decided not to accept this proposal.

D Selection of new members
It was suggested that we look into recruiting new members to serve on this committee.

The meeting was adjourned at approximately 10:15.
Computational Science Minor
Annual Report
Academic Year 2009-2011 and Academic Year 2010-2011

Computational Science Committee
Minutes
October 27, 2010

Present Dr. Hood from Biology, Dr. Levendis from Business, Drs. Calzada, Kelly, and Tucci from Mathematical Sciences, Dr. Biswas from Physics, Dr. Dupuis from Psychology

The meeting was called to order at approximately 12:30.

The minutes of the meeting of April 29 were approved.

Announcements

New members were introduced
  Dr. Biswas
  Dr. Thibodeaux

Dr. Calzada gave an update on the Virtual Lab.
  More access is needed.
  The lab will be handled by one or more servers rather than a network.
  Software needs were discussed.

A Computational Science Lab was being set up in Mo 564. This lab will be for the use of students, and will access the Virtual Lab. The plan is to install Labview and Matlab along with a parallel computing toolbox for Matlab.

IT requests were discussed

Faculty from the Department of Mathematical Sciences submitted a grant for equipment and software to the Board of Regents.

The Interdisciplinary Minors had a meeting on October 4.
  Each Interdisciplinary Minor program has a budget of $1,500.
  A suggestion was made that the Interdisciplinary Minors have a fair to attract students.
  Dr. Tucci reported that Dr. Voigt is thinking of upgrading the Interdisciplinary minors to majors.

It was announced that four students had graduated from the program so far:
  Hunter Fontenot  Chemistry
  Alex Girau  Chemistry
  Anna Lee  Chemistry
  Marc Melancon  Business
Four students were currently in the program:
- Holly Gardner  Physics
- Keegan McCauley  Chemistry
- Warner Sevin  Physics
- David Scheurmann  Communications

Discussion

A general discussion was held about the proposed Interdisciplinary Minors fair. Dr. Hood said that he would collect ideas to create a display for the fair.

Dr. Dupuis said that she would collect information about student achievements for the Web site.

Old Business  none

New business  none

The meeting was adjourned at approximately 1:30.
Computational Science Minor
Annual Report
Academic Year 2009-2011 and Academic Year 2010-2011

Computational Science Committee
Minutes
December 14, 2010

Present Dr. John Levendis of Business, Drs. Michael Kelly and Dr. Ralph Tucci of Mathematical Sciences, Dr. Martin McHugh of Physics for Dr. Thirthabir Biswas of Physics.

The meeting was called to order at approximately 12:30 in Mo 540A.

Minutes The minutes of the meeting of October 27, 2010 were approved.

Announcements

1. The program currently has 6 students.
   Holly Gardner    Physics
   Keegan McCauley  Chemistry
   Neal Outland    Psychology
   Warner Sevin    Physics
   David Scheurmann Communications
   Alexander Templet Biology

2. The Computational Science lab has two machines funded by tech fees. Holly Gardner and Leah Birch are using the lab for their projects.

3. The University Interdisciplinary Minors Committee had a meeting on November 29.
   a. Members of the university Web team displayed statistics on number of hits.
   b. Faculty encouraged the team to allow them to post their list of publications. After a lively discussion, the team said they would facilitate this.
   c. Mention was made of an Interdisciplinary Minors fair. It was tentatively decided that the fair would likely be held early in Spring 2011.
   d. It was mentioned that each minor must have an evaluation plan posted on its Web page.

4. LSU has an REU in computational Science. A flyer was distributed.

5. Tulane scheduled a conference on Computational Science in January 2011.

Old Business None

New Business A general discussion was held on recruiting.

The meeting was adjourned at 1:15.
The committee met at 12:30 in the Senior Commons Room.

Present
Dr. John Levendis from Business, Dr. Thom Spence from Chemistry, Drs. Maria Calzada, Michael Kelly, Jeremy Thibodeaux, Ralph Tucci from Mathematical Sciences
Dr. Patrick Garrity from Physics for Dr. Biswas, and Dr. Erin Dupuis from Psychology.

Approval of the minutes December 14, 2010. The minutes were approved unanimously.

Announcements

1. As mentioned at the previous meeting, the Computational Science Minor program currently has 6 students.

   - Holly Gardner - Physics
   - Keegan McCauley - Chemistry
   - Neal Outland - Psychology
   - Warner Sevin - Physics
   - David Scheurmann - Communications
   - Alexander Templet - Biology

Another student, Ainsley Becnel, has expressed interest in adding the minor.
In 2010 4 students graduated from the program. Numbers are good, especially as compared with other Interdisciplinary Minor programs.

2. The University Interdisciplinary Minors Committee had a meeting on January 31.
   a. The minutes of the meeting of November 29, 2010 were approved. These minutes were distributed to the Computational Science Minor committee through e-mail.
   b. Interdisciplinary Minor programs must post their evaluation plans online.
   c. Debbie Danna announced study abroad options for Computational Science Minor students. Statistics were distributed indicating the number of students studying abroad as well as the percentage in various locations throughout the world. This information was distributed to the Computational Science Minor committee through e-mail.
   d. The University is hosting a Summer Sneak Preview on February 24.
of the Computational Science Committee are urged to attend to publicize courses in the minor which will be offered in Summer 2011.

e. The President’s Open House will be held on April 2. This is another opportunity to publicize the Computational Science Minor.

f. The Interdisciplinary Minors Fair will be held early in Fall 2011.

g. Kathy Gros attended this meeting. She said that she would allow Interdisciplinary Program directors to access their students on LORA.

h. The Council of Associate Deans will discuss the possibility of allowing students to sign up for minors online.

3. REU’s.
   a. REMINDER LSU has an REU in computational Science. A flyer was distributed at the last meeting. The deadline for applications is February 28.

   b. Bard College has an REU which would be of interest to students minoring in Computational Science. The information was distributed through e-mail.

4. Tulane held a conference on Computational Science in January 2011. Dr. Spence presented a paper and Drs. Calzada and Tucci attended.

   Contact was made with some Tulane faculty and staff in Computational Science. We will invite them to some of our meetings, if possible.

5. LSU has hosted several talks on Computational Science.

Old Business None

New Business

General discussion
1. President’s Open House
   a. It might be helpful to get a projector and a screen for display.
   b. Chemistry has a poster printer.

2. Recruiting
   a. A general discussion on recruiting was held. It was suggested that we could meet with Admissions.
   b. Discussion was held on reinstating the Computer Science major.
3. Posting of students’ theses on the Computational Science web site.
4. We should better publicize the fact that we have computers and a Virtual Lab for students in the Computational Minor.

The meeting was adjourned at 1:15.
I Approval of the minutes of February 11, 2011. The minutes are attached.

II Announcements

1. As mentioned at the previous meetings, the Computational Science Minor program currently has 6 students.
   - Holly Gardner  Physics
   - Keegan McCauley  Chemistry
   - Neal Outland  Psychology
   - Warner Sevin  Physics
   - David Scheurmann  Communications
   - Alexander Templet  Biology
   Another student, Ainsley Becnel, has expressed interest in adding the minor.
   In 2010 four students graduated from the program. Numbers are good, especially as compared with other Interdisciplinary Minor programs.

2. The University Interdisciplinary Minors Committee had a meeting on February 28.
   a. Keith Gramling from the Admissions Office was present. He mentioned the need to highlight Loyola’s commitment to interdisciplinary learning. Dr. Tucci requested that Admissions meet with faculty in the Computational Science Minor program.
   b. Discussion was held on the President’s Open House.
   c. A long discussion ensued on assessment. We already have routine statistics, such as number of students and number of graduates. SACS requires that we integrate planning, budgeting, and assessment.
   d. The directors of the minor programs need to provide annual reports. Heather Mack was present and distributed a Systemic Assessment Guide.

3. Advisors of students on the Computational Science Minor program need to send me a summary of what their students are working on.

4. Advisors of students in the Interdisciplinary Science Minor Program
   a. I was told that directors of the Interdisciplinary Minors would have access to their students on LORA. This seems not to be the case. I will check with the Registrar’s Office.
   b. Advisors need to make sure that their students are taking the required courses.
In particular, Math A271 Applied Scientific Computing and Math A375 Computational Mathematics are not scheduled every year.

III Old Business

1. Discussion of the Summer Sneak Preview, February 24.

2. Discussion of the President’s Open House.

IV New Business

Annual reports. Directors of the minor programs are required to complete annual reports. Dr. Tucci will be requesting information from the faculty in the Interdisciplinary Sciences Minor program.

Attached: Draft of the minutes of February 11.