Agenda, January 28, 2000
CCGB Meeting

1. Approval of Minutes
2. Undergraduate Announcements
3. Proposed Changes to Liberal Studies Distribution
4. Prioritize Agenda Items for the Semester

CCGB/CPC Minutes
January 21, 2000


P. Kintner (EE) discussed the handouts and agenda. He emphasized that the CPC acts as a committee of CCGB. He proposed that both motions be considered. J. Hopcroft (Dean of Engr. Coll.) stated the importance of the College coming to a clear consensus. He is pleased with the way things have been proceeding thus far.

Proposal #1 (CPC) Handout attached.

M. Miller (M&AE), chair of the CPC, stated that the committee chose to examine the core curriculum during the fall. A needs assessment was done by each CPC member, which resulted in the proposed modular format. The proposal was unanimously approved by the CPC.

L. Lion (CEE) said that his colleagues have no strong position on the proposal. There was some concern that several options would be confusing to both freshmen and advisors and that, since all routes were equal, a Matlab-based course like 241 could not assume students would be better prepared. M. Miller countered this by explaining that for the first 7 weeks of the semester, freshmen would basically take the same thing, i.e. 100M.

A. Ruina (T&AM) suggested that the proposal should ensure Matlab competency amongst the students. Even those students with AP credit in Math might not be competent in Matlab.

M. Thompson (MS&E) stated that he is concerned about the emphasis placed on Matlab because it will likely not be the tool of choice in future years. He feels that the College should not dictate which tools should be used, and multiple tool options should be offered. C. VanLoan (CS) countered this by stating that, while Matlab might not be the future tool of choice, it is currently being used and the current requirements must be met. Matlab is a perfect vehicle for the students for problem solving and remembering those processes. M. Miller (M&AE) added that the CPC made their CS100 formatting decisions based on the tools already in place. Matlab has been incorporated into many courses.
F. Gouldin (M&AE) expressed his concern that the current tools being used are solely for the students to get through the next 2-3 years and will not provide the students with the necessary knowledge for their adaptation to the working world. A. Ruina (T&AM) disagreed with this view, stating that rather than promoting a large variety of tools, the basics in CS need to be reinforced and relative computer concepts should be emphasized. D. Maloney Hahn (Advising) stated that too many options would be confusing for the students, leading to an administrative nightmare.


M. Thompson (MS&E) emphasized the need for competency in computing and tools. He envisions computer programming disappearing and becoming less important for engineers. He would like to see 100M as the only computer requirement in the freshman year, which would make possible smaller, more comfortable classes. Different fields use different languages and have different goals. P. Kintner (EE) disagreed that computing will become less important for engineers. He feels that engineers need to understand computing at all levels and, therefore, students need to be prepared with the basic language competency necessary for higher levels of computing. M. Thompson countered this by stating that his research demonstrates that very few departments in other colleges/universities have computing requirements. D. Schwartz (CS) stated that Mathematica and Matlab are used by other schools, sometimes in a separate tools course.

B. East (Admissions) urged flexibility in the curriculum for the freshman year, because it is critical for students to explore all of their options. C. Van Loan (CS) stated that he agrees that flexibility is important, and they will continue to accommodate students one way or another as they have in the past. F. Wise (A&EP) expressed the concern that adding options would be confusing for the students, prompting them to make poor decisions about which courses to take. He also stated that his colleagues in A&EP were concerned about the resources allocation for additional CS100 courses and also with the perception that CS100 might be off-loaded onto faculty in other departments. According to C. Van Loan (CS), the staffing needs will not change and thus additional resources will not be necessary. The faculty in CS will handle CS100 and will not dump that workload onto the faculty in other departments.

P. Kintner (EE) polled faculty for further comments before voting on the proposals.

D. Grubb (MS&E) wondered what all the controversy was about, stating that he believes that tools should be taught later, as they are needed in various courses. D. Aneshansley (ABEN) said that he feels that Matlab is a good tool for the students. He also feels that, due to the diverse needs of the departments, it is difficult to make one language standard. J. Bartsch (ABEN) agreed that Matlab is a good tool, although it makes some students nervous. They are offering a 1-credit Matlab course this semester to ease students into it. He stressed the importance of students having both tools AND programming experience. L. Lion (CEE) said that his colleagues have no strong position on this issue, and a single CS course at the freshman level would be sufficient. The students currently view the recommendations in the course book as requirements, which is bad. F. Gouldin (M&AE) stated that his department is increasing the use of computers and computational design tools in their curriculum. Matlab and Excel are the most widely used. J. Jenkins (T&AM) said that his department uses Matlab in their sophomore mathematics course. He feels that a single requirement of 100M and 100J would be suitable. C. Van Loan (CS) stated that, although an inundation of
options for freshmen is not ideal, they need to make SOME choices. R. Kay (Geo. Sci.) declared that it is important for the Math and CS juxtaposition to be matched.

P. Kintner (EE) called for a vote on the two proposals. Six faculty voted in favor of the CPC proposal and one for the Thompson proposal.

The CPC proposal was closely examined. A. Ruina (T&AM) wondered if Math 191 should be a co- or pre-requisite for CS100. He feels that faculty need the freedom to incorporate calculus, and maybe the threshold for 100B could be lowered and the one in Classic could be raised for the students. He proposed to amend the proposal to: “Students granted AP credit need to be clearly informed of the requirements for Matlab.” This amendment was voted on, with one in favor, four opposed, and three abstentions.

F. Gouldin (M&AE) proposed to amend the resolution to read: “The Freshman Computing requirement will consist of 2 courses: The first will consist of 7 weeks of Matlab followed by 7 weeks of C++. The second will consist of 100J.” This amendment was voted on, with one in favor, six opposed, and one abstention.

L. Lion (CEE) proposed to amend the resolution to read: “The Freshman Computing requirement will consist of 2 options in a single course. The course will be administered so that students may select which option is best for them. All freshmen will be required to complete either 100M or 100J or to receive advanced placement for the requirement as determined by the Department of Computer Science. 100M corresponds to Table 1, and 100J corresponds to Table 2.” This amendment was voted on, with six in favor, one opposed, and one abstention.

M. Miller (M&AE) emphasized the importance of making the changes in CS100 clear so that advisors can understand the changes and relay the choices accurately to their advisees. D. Maloney Hahn (Advising) suggested that the folks in CS explain the important distinctions to advisors, as they are the best informed to do so. Otherwise he envisions a nightmare during add/drop with the splitting of the courses. C. Van Loan (CS) said that with the new course structure students will not be able to jump from one course to the other, as is currently done.

F. Gouldin (M&AE) suggested that the Rationales and Whereas were unnecessary in the proposal. This suggestion was approved.
Resolution 1 was unanimously approved to read as follows:

The Freshman Computing requirement will consist of 2 options. All freshmen will be required to complete either 100M or 100J or to receive advanced placement for the requirement as determined by the Department of Computer Science. 100M corresponds to Table 1 (below), and 100J corresponds to Table 2 (below).

<table>
<thead>
<tr>
<th>Table 1. 100M (Matlab and Java)*</th>
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<tbody>
<tr>
<td><strong>Week</strong></td>
<td><strong>Topics</strong></td>
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| 1 | Introduction  
Assignment/Elem. Functions |
| 2 | Iteration/scripts  
Conditionals |
| 3 | Iteration  
Iteration |
| 4 | Functions  
Functions |
| 5 | Arrays  
Arrays |
| 6 | File I/O/strings  
Graphics |
| 7 | 2d Arrays  
Graphics |
| 8 | Fundamentals  
Conditionals |
| 9 | Iteration  
Iteration |
| 10 | Classes-objects-methods  
Classes-objects-methods |
| 11 | Arrays  
Arrays |
| 12 | Classes-objects-methods  
Classes-objects-methods |
| 13 | Inheritance  
Inheritance |
| 14 | Strings  
2d Arrays |

*Matlab will be used weeks 1-7 and Java used weeks 8-14. 100M will use examples employing first semester calculus and Math 191 is a co-requisite or pre-requisite.

<table>
<thead>
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<th>Table 2. CS100J (Java)</th>
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<tr>
<td><strong>Week</strong></td>
<td><strong>Topics</strong></td>
</tr>
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</table>
| 1 | Introduction  
Variables/assignment/IO |
| 2 | Variables/assignment/IO  
Conditionals |
| 3 | Iteration  
Iteration |
| 4 | Iteration  
Classes-objects-methods |
| 5 | Classes-objects-methods  
Classes-objects-methods |
| 6 | Classes-objects-methods  
Classes-objects-methods |
| 7 | Classes-objects-methods  
Strings |
| 8 | Strings  
Arrays |
| 9 | Arrays  
Matlab |
| 10 | Matlab  
2d Arrays |
| 11 | 2d Arrays  
Matlab |
| 12 | Matlab  
Inheritance |
| 13 | Inheritance  
Binary & Linear Search |
| 14 | Sorting  
Recursion |

By unanimous agreement, Resolutions 2 and 3 were deleted from the original proposal, as was the Rationale.

The meeting adjourned at 11:45 a.m.
Appendices (to be handed out with the minutes at the 1/28/00 meeting):

1. CS 100: Recommendation to the CCGB from the Computing Policy Committee.
2. Motion to Revise the Freshman Core Computing Curriculum (FCCC) – CPC
3. Motion to Revise the Freshman Core Computing Curriculum – M. O. Thompson