

1. Please list two highlights related to your participation in the MICB405 group project.

-learnt more about conference style poster presentations -learnt more about progress report
I learned to use Pymol and Clustal which will be useful in the future
-BLAST searching -3D protein prediction and comparison
-I learned to seek and interpret various bioinformatics tools and their results -I felt that this course enabled me to better search for and use bioinformatics tools despite not being explicitly taught how to use them
- wrote the methods and results section of the protein modeling section as well as edit report -did part of the protein structuring (pymol)
-predicted 3D structure of outer membrane receptor -involved in annotating - made gene annotation figure with Tony
-learnt the tools much better -learnt a lot about my topic
-learned about my topic -sorry, wasn't too much of a highlight in general
-researching about bioinformatic tools -presenting and analyzing results from project
-learned how to present in a conference
-exploring alternative directions -preliminary research
1. poster session! I like presenting and talking to people about interesting stuff in small groups 2. I was impressed by how much can be accomplished without wet lab work
1. Wow, so you really CAN do a project without wet lab 2. The poster session was fun
worked and got to know new group members participation in the ups and downs of research
-realizing that "real" research can be done with bioinformatics tools alone -expanded knowledge in many other areas during literature reading
-helped our understanding of some of the bioinformatics tools -my first experience conducting my *own* research
-allowed us to use & really understand bioinformatics tool -allowed interaction with fellow
-helped to find sequences of interests & align them using clustal -participate in editing &
-very scientific-like -good to put what we've learnt to good use
-learning and researching a new topic -practical applications of what was learned in class
-learning, researching about a new topic -discovering how bioinformatics and tools learned in class can be applied to biological questions
-the application of computer science fundamentals in a bioinformatics approach -learning about programs outside of what was covered in class
-learning new tools -easier to learn by doing
-make and print poster -MSA, clustal tree of WNT related proteins -literature searches for biological info
-3D structure -Clustal phylogenetic tree
-challenged my critical thinking abilities -able to collaborate with other members to generate a project idea
-got to learn a whole lot of new techniques! -got a feel of how bioinformatics projects work, sometimes it involves getting stuck & not finding needed sequences & structures
-read many papers -learnt how to manipulate a new structure alignment program -learnt how to effectively search for relevant material through Entrez
-learned how to use bioinformatics tools -learned how to put together an effective poster
-trying out new programs and getting comfortable with not being afraid to try new programs - working in a collaborative atmosphere to make a paper and poster
-using bioinformatics tools solely to investigate a question -learned to use PYmol *really* well. will be useful for future protein related projects
-poster presentation -working with peers

-learning how to implement statistical tests using MATLAB -developing somewhat novel technique to detect co-evolution

-I worked on mapping 3D domains on hypothetical structures and looking at specific epitopes using the MSA -I learned a lot about the different methods used

-literature search -provide background and related research to our project

-learning to use the different programs -interchanging information with group partners

-learned lots about structural alignment -learned to think about bad results

-using the bioinformatics tools -formulating/answering biological question using bioinformatics

-presented to most people, fun -I enjoyed the peer evaluation and talking with M. Murphy

-working on an interesting & relevant topic -using bioinformatics tools like BLAST and

-practicing to use bioinformatics tools I learned in class -learning to apply the knowledge to a practical project

-idea exchange -team work

interactive learning through using BLAST and clustal poster session was fun to look at other PPI's

-performed multiple sequence alignments using clustal to generate results -wrote methods section of report

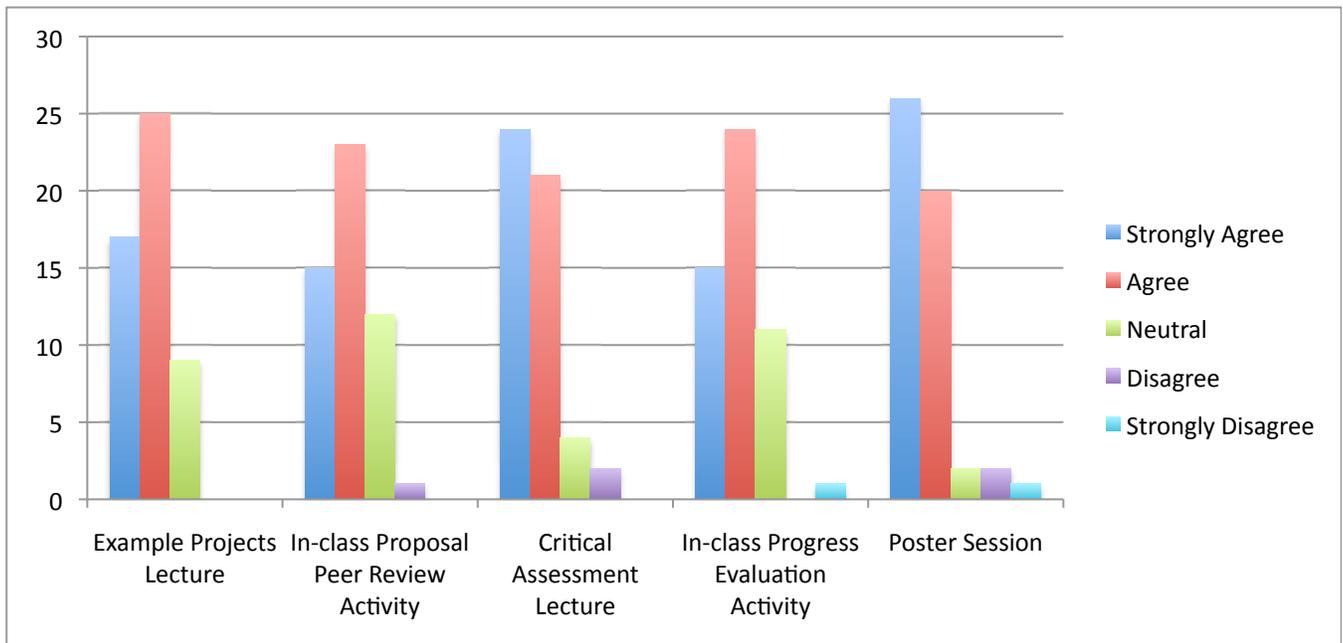
It was great to come up with an interesting topic (also very hard!) and I feel that I learned a lot about how to do bioinformatics research

-brainstorming ideas, topic chosen was an idea tossed by me -poster format, worked hard to make the poster look attractive

-using homology models -learning about the techniques

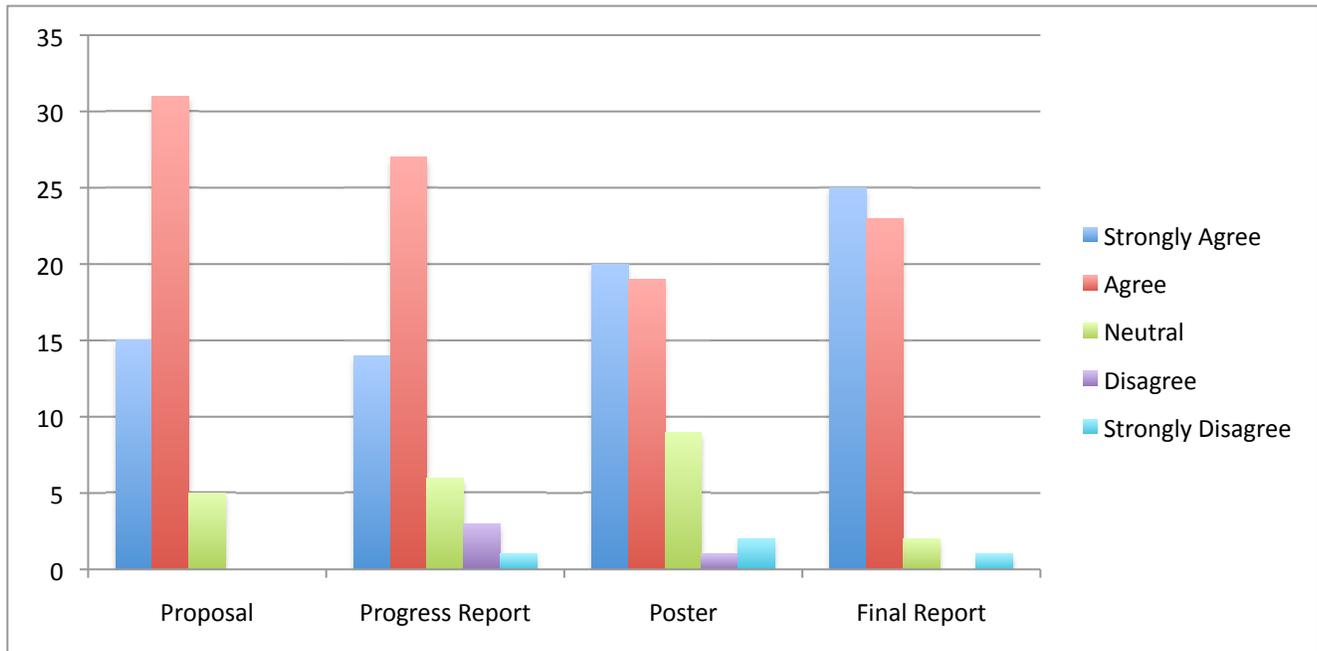
staying late at the LSC to work on project staying late at Woodward to work on project

2. The following activities associated with the group project for MICB405 helped me to learn:



collected from students at the end of term, FALL 2008 offering

3. The following deliverables associated with the group project for MICB405 helped me to learn:



4. Please comment on your group project experience. How was this experience valuable?

it allowed me to meet new people and how to work together with others in a group. It also allowed me to learn more about bioinformatics that I would have individually

I got to learn from my peers

gives good understanding of the process of bioinformatics research

Lots of work!!

-it allowed me to work with other people I've never worked with before -gave me hands-on experience with various bioinformatics tools like BLAST and Clustalx

-Good learning experience -hands-on work with bioinformatics tools -learning from others & learning together -poster presentation = very valuable

-learned to mediate between members

Sorry, not really. Because this is the first bioinformatics course that we have taken - assignments would have work better and ensured every one learned the same amount

-helped us learn how to create a biological question and test it using bioinformatics

-learned about a new area of research -reinforced techniques discussed in lecture

-learned about a lot of resources/tools I might not have otherwise -was able to practice applying and integrating them

I learned to use bioinformatics tools

It was a stressful experience during but valuable in that it gives a taste of what real research is great way to learn group coordination! Allowed us to choose area of interest.

It was nice doing our own research

made me synthesize & utilise ideas learned in class

very good, learn to use bioinformatics tools poster & presentation

Yes. It was efficient and useful; however, we always feel that we don't know enough tools to solve the question (for most of the course)

-learn to collaborate -do a whole project from start to finish

The group worked very well together. Each person had their strengths they contributed to the project
learned about process of doing a research project from beginning to end
-learning to use tools well -was good experience
It helped us work together better as a group - by questioning each other's findings and building a scientifically sound poster
very valuable and learning
group experience allowed different input of ideas and collaboration. provided a much more detailed descriptive project idea - research approaches
I did not enjoy the project due to continuous conflicts with a group member. The work is much more then the project is worth.
It was a lot of work It was valuable because I learned a lot from other group members
learning new techniques and more collaborations are always helpful
provides a realistic example of the type of work that would be an integral part of research and is of particular relevance to major, Biotech
-learned a lot -enjoyed poster presentation
It is a good chance to implement the skills we've learned
we got to learn how to use and relate a lot of new bioinformatics tools that I didn't even know existed
it's interesting to apply the stuff we learned in lecture
It was a good experience & application of knowledge gained. It was good as a team project to learn to work together, where everyone is specialized.
-valuable by actually *doing* all the things we learned in class
help me understand research progress
I had an excellent group so it helped team building. Also forced us to try tools used in class for deeper understanding.
Yes, it was. I don't think the course topics would be as easily learned without the application.
-Research + writing report etc. was very helpful in learning -connects what I learned to practical research
similar to other undergraduate projects with variation in type of approach
It was very useful for interactive learning. Really enjoyed the one to one meeting sessions
a chance to use the different bioinformatics tools
I think it will definitely be helpful because I want to go into research
learned the possibility of bioinformatics -knowledge that bioinformatics programs aren't user friendly. you need knowledge of the program before you use it
helped me to get experience with bioinformatics
Hands-on experience with the tools is awesome, need more of that.
practicing with the tools discussed in class made me understand them much better
because I have already done research projects, it was not as valuable to me. I suggest doing small independent assignments (along with project). Perhaps to save time, you could come up with project ideas and the teams pick one.

5. Please list up to three suggestions for improving next year's group project as a course component for MICB405.

1. maybe have the proposal review sessions soon after we hand it in so we can more easily change/improve the project earlier since we didn't get a review session until 3 weeks after we handed in our proposals.
2. maybe for poster presentations, everyone who is judging can get into their project groups and go around to see all the displays together

A lot of time goes into the project it should definitely be worth more
-more time for project, maybe move the presentation to exam period or post exam period?
introduce more bioinformatics tools?
1. more time - help us keep on track even more 2. more feedback 3. submit a draft - like in MICB421
-the same work was put into the poster and the final report. Perhaps only one is necessary?
-do small assignments throughout the term, based on the tools discussed. Like the tutorial, but more independent.
(ie. you give us a protein with no known structure), we have to blast its sequence and use swiss-model to model the protein. Because some techniques were not used in the project, so we got no practice with them
3. tutorial: useful, but perhaps take attendance so that not everyone comes to the morning class (too full). Also keep the computer tutorials going all through the term, so we get more time to practice techniques with the TA there.
more concrete examples for project ideas
-more tutorials on how to use the programs -more comprehensive/detailed notes about programs
list of alternate programs that could help validate research results
-If the project is going to be so much work it should be worth more of the overall course grade - provide us with the topic, could give suggestions from previous years -not have a progress report or proposal that needs to be done
-second scheduled meeting with instructor (after progress report?)... self evaluation was fairly constant, external evaluation (instructor, peers) was more valuable
-allow everyone to see all the posters (maybe get a bigger room and have all the posters at once with group members presenting in shifts? over 2 days or longer class period?)
1. not have page limit on final report 2. allow students to see all the posters, instead of just half (shifts?) 3. 1 more scheduled meeting with instructor after progress report
perhaps a more concrete, detailed outline for the project -give more guidelines
more examples
-less open ended -more help on project ideas
It's great, not much to be improved
-pay instructors more -might need to teach us more skills as soon as possible so we won't feel so lost in the beginning when writing our project proposal
-some class time -hard to get started in the beginning when we hadn't learned as much
-more class time to discuss project -hard to plan full scope of project when we hadn't learned about the tools yet (e.g. MSA, structural analysis come after proposal was written therefore aims kept changing)
perhaps more suggestions for programs to explore (e.g. PHYLP)
great idea - have worth more?
increase the grade allocation of the project to reflect the amount of work that must be put in
make the project optional and worth less or more
allow bigger groups to be formed more class time to work on poster
not having the poster and report due in the same week would allow better poster preparation
move in-class guidance of high usage programs like Pymol -scrap progress report... it confused us as criticisms were made in this report and not in our original proposal. Feedback should be
-maybe less writing -earlier progress report -worth less of grade
the peer review of proposals in class was not very helpful because we did not receive good constructive feedback (only comments such as "double-space your information")
1) more guidance 2) possibly another mid-way checkup 3) more example posters
I would suggest smaller groups and an urge towards smaller, tighter focus questions

more practice with the programs
-help groups choose ideas (hardest part) -you guys did as best you could for most part -less work!! haha
no suggestions
-poster presentation/prep is too time consuming ... replace with powerpoint? -peer review of proposal wasn't very useful -poster judgement by students may not be so accurate
plan on day one evaluation must change and not be cold response anymore all groups must be interested in their projects
progress report earlier so get feedback earlier
I think it's absolutely great!
make it worth a few more percent more - just doesn't seem worth it when it's worth so little.
project section has lot of smaller component that splits to smaller parts
no poster presentation
pay Michael more pay Joanne more pay Paul more