

FLORIDA ATLANTIC UNIVERSITY™

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Graduate Programs—NEW COURSE PROPOSAL

DEPARTMENT NAME: Basic Science	COLLEGE OF: Charles E. Schmidt College of Biomedical Science
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RECOMMENDED COURSE IDENTIFICATION: PREFIX _____ PCB _____ COURSE NUMBER _____ 6238 _____ LAB CODE (L or C) _____ (TO OBTAIN A COURSE NUMBER, CONTACT ERUDOLPH@FAU.EDU) COMPLETE COURSE TITLE Problem-based Immunology	EFFECTIVE DATE (first term course will be offered) <div style="text-align: center; font-size: 1.2em; font-weight: bold;">SUMMER 2010</div>
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CREDITS: 3	TEXTBOOK INFORMATION: <u>Immunology for Medical Students</u> by Roderick Nairn and Matthew Helbert. Mosby Elsevier ISBN 13 978-0-323-04331-1 - Required <u>The Immune System</u> by Peter Parham. Garland Science SBN 978-0-8153-4146-8 - Recommended
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GRADING (SELECT ONLY ONE GRADING OPTION): REGULAR PASS/FAIL _____ SATISFACTORY/UNSATISFACTORY _____

COURSE DESCRIPTION, NO MORE THAN 3 LINES: This course provides an up-to-date understanding of basic science of immunology and how that science applies to the realities of patient care. The fundamental mechanisms of immunity are illustrated by cases of genetic defects in the immune system, immune complex diseases, immune mediated hypersensitivity reactions and autoimmune and alloimmune diseases.

PREREQUISITES W/MINIMUM GRADE: * PCB 4233 or equivalent Minimum grade: B-	COREQUISITES:	OTHER REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL): Graduate Students Only
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PREREQUISITES, COREQUISITES & REGISTRATION CONTROLS SHOWN ABOVE WILL BE ENFORCED FOR ALL COURSE SECTIONS.
 * DEFAULT MINIMUM GRADE IS D-

MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE:
Ph.D.

Other departments, colleges that might be affected by the new course must be consulted. List entities that have been consulted and attach written comments from each.
 Department of Biology

Mahyar Nouri-Shirazi, Ph.D., mnourish@fau.edu, tel: 297-0935
 Faculty Contact, Email, Complete Phone Number

SIGNATURES SUPPORTING MATERIALS

Approved by: _____ Department Chair: _____ College Curriculum Chair: _____ College Dean: _____ UGPC Chair: _____ Dean of the Graduate College: _____	Date: 3-16-10 3-16-10 3-16-10	Syllabus—must include all details as shown in the UGPC Guidelines. Written Consent—required from all departments affected. Go to: http://graduate.fau.edu/gpc/ to download this form and guidelines to fill out the form.
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Email this form and syllabus to diamond@fau.edu and eqirjo@fau.edu one week **before** the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website by committee members prior to the meeting.

Problem-Based Immunology (PBI)

Course Number: PCB 6238

Prerequisites: PCB 4233

Corequisites: None

Course Director: Mahyar Nouri-Shirazi, D.V.M., Ph.D.

Room number: 326

Office Phone: (561)-297-0935

Email address: Mahyar.shirazi@fau.edu

Office hours: After the lecture hours on Thursdays

Lecture hours: Tuesdays and Thursdays, 9:00 AM – 12:10 PM

Lecture room: 130

Textbooks:

- 1) Immunology for Medical Students, Roderick Nairn and Matthew Helbert, 2nd Edition, MOSBY ELSEVIER, 13-digit ISBN 978-0-323-04331-1 (REQUIRED);
- 2) Janeway's Immunobiology, 7th Edition, Garland Science, Taylor & Francis Group, LLC 2008, 13-digit ISBN 978-0-8153-4123-9 (RECOMMENDED).

Note: It is advised that all students read the first section (Introduction) of the textbook prior to the first lecture. This is especially important for students who have not recently had a formal course in immunology.

Bibliography:

TEXTBOOKS

- 1) Immunology for Medical Students, Roderick Nairn and Matthew Helbert, 2nd Edition, MOSBY ELSEVIER, 13-digit ISBN 978-0-323-04331-1
- 2) Janeway's Immunobiology, 7th Edition, Garland Science, Taylor & Francis Group, LLC 2008, 13-digit ISBN 978-0-8153-4123-9
- 3) The Immune System, Peter Parham, 3th Edition, Garland Science, Taylor & Francis Group, LLC 2009, 13-digit ISBN 978-0-8153-4146-8
- 4) Case studies in Immunology – a clinical companion, Raif Geha and Fred Rosen, 5th Edition. Garland Science, Taylor & Francis Group, LLC 2008, 13-digit ISBN 978-0-8153-4145-1

- 5) Problem-based Immunology, Reginald M. Gorczynski and Jacqueline Stanley, Saunders, Elsevier, 2006, 13-digit ISBN 978-1-4160-2416-3

REVIEW ARTICLES

Topic 1: Immunodeficiency Disorders

- 1) Ballou M, Notarangelo L, Grimbacher B, Cunningham-Rundles C, Stein M, Helbert M, Gathmann B, Kindle G, Knight AK, Ochs HD, Sullivan K, Franco JL. Immunodeficiencies. *Clin Exp Immunol.* 2009 Dec;158 Suppl 1:14-22. Review. PubMed PMID: 19883420; PubMed Central PMCID: PMC2801032.
- 2) Bacchelli C, Buckridge S, Thrasher AJ, Gaspar HB. Translational mini-review series on immunodeficiency: molecular defects in common variable immunodeficiency. *Clin Exp Immunol.* 2007 Sep;149(3):401-9. Review. PubMed PMID: 17697196; PubMed Central PMCID: PMC2219326.
- 3) García JM, Español T, Gurbindo MD, Casas C C. Update on the treatment of primary immunodeficiencies. *Allergol Immunopathol (Madr).* 2007 Sep-Oct;35(5):184-92. Review. PubMed PMID: 17923072.

Topic 2: Tumor Immunology

- 1) Borghaei H, Smith MR, Campbell KS. Immunotherapy of cancer. *Eur J Pharmacol.* 2009 Dec 25;625(1-3):41-54. Epub 2009 Oct 20. Review. PubMed PMID: 19837059; PubMed Central PMCID: PMC2783916.
- 2) Sioud M. Does our current understanding of immune tolerance, autoimmunity, and immunosuppressive mechanisms facilitate the design of efficient cancer vaccines? *Scand J Immunol.* 2009 Dec;70(6):516-25. Review. PubMed PMID: 19906192.

Topic 3: Hypersensitivity

- 1) Suarez CJ, Parker NJ, Finn PW. Innate immune mechanism in allergic asthma. *Curr Allergy Asthma Rep.* 2008 Sep;8(5):451-9. Review. PubMed PMID: 18682113.
- 2) Hammad H, Lambrecht BN. Dendritic cells and epithelial cells: linking innate and adaptive immunity in asthma. *Nat Rev Immunol.* 2008 Mar;8(3):193-204. Review. PubMed PMID: 18301423.
- 3) Greenberger PA. 7. Immunologic lung disease. *J Allergy Clin Immunol.* 2008 Feb;121(2 Suppl):S393-7; quiz S418. Review. PubMed PMID: 18241689.
- 4) Wollenberg A, Klein E. Current aspects of innate and adaptive immunity in atopic dermatitis. *Clin Rev Allergy Immunol.* 2007 Oct;33(1-2):35-44. Review. PubMed PMID: 18094945.
- 5) Averbeck M, Gebhardt C, Emmrich F, Treudler R, Simon JC. Immunologic principles of allergic disease. *J Dtsch Dermatol Ges.* 2007 Nov;5(11):1015-28. Review. English, German. PubMed PMID: 17976144.

- 6) Posadas SJ, Pichler WJ. Delayed drug hypersensitivity reactions – new concepts. *Clin Exp Allergy*. 2007 Jul;37(7):989-99. Review. PubMed PMID: 17581192.
- 7) Jutel M, Akdis M, Blaser K, Akdis CA. Mechanisms of allergen specific immunotherapy--T-cell tolerance and more. *Allergy*. 2006 Jul;61(7):796-807. Review. PubMed PMID: 16792576.

Topic 4: Autoimmunity

- 1) Chervonsky AV. Influence of microbial environment on autoimmunity. *Nat Immunol*. 2010 Jan;11(1):28-35. Epub 2009 Dec 17. Review. PubMed PMID: 20016507.
- 2) von Boehmer H, Melchers F. Checkpoints in lymphocyte development and autoimmune disease. *Nat Immunol*. 2010 Jan;11(1):14-20. Epub 2009 Dec 17. Review. PubMed PMID: 20016505.
- 3) Wing K, Sakaguchi S. Regulatory T cells exert checks and balances on self tolerance and autoimmunity. *Nat Immunol*. 2010 Jan;11(1):7-13. Epub 2009 Dec 17. Review. PubMed PMID: 20016504.
- 4) Israeli E, Agmon-Levin N, Blank M, Shoenfeld Y. Adjuvants and autoimmunity. *Lupus*. 2009 Nov;18(13):1217-25. Review. PubMed PMID: 19880572.
- 5) Dörner T, Jacobi AM, Lipsky PE. B cells in autoimmunity. *Arthritis Res Ther*. 2009;11(5):247. Epub 2009 Oct 14. Review. PubMed PMID: 19849820; PubMed Central PMCID: PMC2787254.
- 6) St Clair EW. Novel targeted therapies for autoimmunity. *Curr Opin Immunol*. 2009 Dec;21(6):648-57. Epub 2009 Oct 12. Review. PubMed PMID: 19828300; PubMed Central PMCID: PMC2792714.
- 7) Shlomchik MJ. Activating systemic autoimmunity: B's, T's, and tolls. *Curr Opin Immunol*. 2009 Dec;21(6):626-33. Epub 2009 Sep 30. Review. PubMed PMID: 19800208; PubMed Central PMCID: PMC2787881.
- 8) Chervonsky A. Innate receptors and microbes in induction of autoimmunity. *Curr Opin Immunol*. 2009 Dec;21(6):641-7. Epub 2009 Sep 9. Review. PubMed PMID: 19747810.
- 9) Schiraldi M, Monestier M. How can a chemical element elicit complex immunopathology? Lessons from mercury-induced autoimmunity. *Trends Immunol*. 2009 Oct;30(10):502-9. Epub 2009 Aug 24. Review. PubMed PMID: 19709928.
- 10) Invernizzi P, Gershwin ME. The genetics of human autoimmune disease. *J Autoimmun*. 2009 Nov-Dec;33(3-4):290-9. Epub 2009 Aug 13. Review. PubMed PMID: 19682858.
- 11) Agarwal S, Cunningham-Rundles C. Autoimmunity in common variable immunodeficiency. *Curr Allergy Asthma Rep*. 2009 Sep;9(5):347-52. Review. PubMed PMID: 19671377.

- 12) Balagué C, Kunkel SL, Godessart N. Understanding autoimmune disease: new targets for drug discovery. *Drug Discov Today*. 2009 Oct;14(19-20):926-34. Epub 2009 Jul 23. Review. PubMed PMID: 19596080.
- 13) Dedeoglu F. Drug-induced autoimmunity. *Curr Opin Rheumatol*. 2009 Sep;21(5):547-51. Review. PubMed PMID: 19593142.
- 14) Balagué C, Kunkel SL, Godessart N. Understanding autoimmune disease: new targets for drug discovery. *Drug Discov Today*. 2009 Oct;14(19-20):926-34. Epub 2009 Jul 23. Review. PubMed PMID: 19596080.
- 15) Invernizzi P, Gershwin ME. The genetics of human autoimmune disease. *J Autoimmun*. 2009 Nov-Dec;33(3-4):290-9. Epub 2009 Aug 13. Review. PubMed PMID: 19682858.
- 16) Ercolini AM, Miller SD. The role of infections in autoimmune disease. *Clin Exp Immunol*. 2009 Jan;155(1):1-15. Review. PubMed PMID: 19076824; PubMed Central PMCID: PMC2665673.
- 17) Durandy A, Kaveri SV, Kuijpers TW, Basta M, Miescher S, Ravetch JV, Rieben R. Intravenous immunoglobulins--understanding properties and mechanisms. *Clin Exp Immunol*. 2009 Dec;158 Suppl 1:2-13. Review. PubMed PMID: 19883419; PubMed Central PMCID: PMC2801035.

Topic 5: Transplantation

- 1) Ford ML, Kirk AD, Larsen CP. Donor-reactive T-cell stimulation history and precursor frequency: barriers to tolerance induction. *Transplantation*. 2009 May 15;87(9 Suppl):S69-74. Review. PubMed PMID: 19424013; PubMed Central PMCID: PMC2719977.
- 2) Ferrara JL, Levine JE, Reddy P, Holler E. Graft-versus-host disease. *Lancet*. 2009 May 2;373(9674):1550-61. Epub 2009 Mar 11. Review. PubMed PMID: 19282026; PubMed Central PMCID: PMC2735047.
- 3) Auletta JJ, Cooke KR. Bone marrow transplantation: new approaches to immunosuppression and management of acute graft-versus-host disease. *Curr Opin Pediatr*. 2009 Feb;21(1):30-8. Review. PubMed PMID: 19242239.
- 4) Ball LM, Egeler RM; EBMT Paediatric Working Party. Acute GvHD: pathogenesis and classification. *Bone Marrow Transplant*. 2008 Jun;41 Suppl 2:S58-64. Review. PubMed PMID: 18545246.
- 5) Boros P, Bromberg JS. De novo autoimmunity after organ transplantation: targets and possible pathways. *Hum Immunol*. 2008 Jul;69(7):383-8. Epub 2008 Jun 9. Review. PubMed PMID: 18638653.
- 6) Gangappa S, Kokko KE, Carlson LM, Gourley T, Newell KA, Pearson TC, Ahmed R, Larsen CP. Immune responsiveness and protective immunity after transplantation. *Transpl Int*. 2008 Apr;21(4):293-303. Epub 2008 Jan 21. Review. PubMed PMID: 18225995.

- 7) Lin T, Zhou W, Sacks SH. The role of complement and Toll-like receptors in organ transplantation. *Transpl Int*. 2007 Jun;20(6):481-9. Review. PubMed PMID: 17493022.
- 8) Trivedi HL. Immunobiology of rejection and adaptation. *Transplant Proc*. 2007 Apr;39(3):647-52. Review. PubMed PMID: 17445565.
- 9) Shlomchik WD. Graft-versus-host disease. *Nat Rev Immunol*. 2007 May;7(5):340-52. Review. PubMed PMID: 17438575.
- 10) Young JW, Merad M, Hart DN. Dendritic cells in transplantation and immune-based therapies. *Biol Blood Marrow Transplant*. 2007 Jan;13(1 Suppl 1):23-32. Review. PubMed PMID: 17222766.
- 11) Zhao Y, Li X. Cross-immune tolerance: conception and its potential significance on transplantation tolerance. *Cell Mol Immunol*. 2010 Jan;7(1):20-5. Epub 2009 Dec 23. PubMed PMID: 20029463.

Topic 6: Immunization

- 1) O'Hagan DT, De Gregorio E. The path to a successful vaccine adjuvant--'the long and winding road'. *Drug Discov Today*. 2009 Jun;14(11-12):541-51. Epub 2009 Mar 5. Review. PubMed PMID: 19508916.
- 2) Woodland DL, Kohlmeier JE. Migration, maintenance and recall of memory T cells in peripheral tissues. *Nat Rev Immunol*. 2009 Mar;9(3):153-61. Review. PubMed PMID: 19240755.
- 3) Plotkin SA. Vaccines: correlates of vaccine-induced immunity. *Clin Infect Dis*. 2008 Aug 1;47(3):401-9. Review. PubMed PMID: 18558875.
- 4) Kang SM, Compans RW. Host responses from innate to adaptive immunity after vaccination: molecular and cellular events. *Mol Cells*. 2009 Jan;27(1):5-14. Epub 2009 Feb 5. Review. PubMed PMID: 19214429.

Course Description: In this course, the fundamental mechanisms of immunity are illustrated by cases of genetic defects in the immune system, immune complex diseases, immune mediated hypersensitivity reactions and autoimmune and alloimmune diseases. The clinical cases for this course are chosen for two purposes: 1) to illustrate in a clinical context essential points about the mechanisms of immunity; and 2) to describe and explain some of the immunological problems often seen in the clinic. The course is a three-credit course.

Method of Instruction: Each case is presented in the following format. The case history is preceded by basic scientific facts that are needed to understand the case history (Introduction). The case history is followed by a summary of the disease under study (Clinical Case). The clinical case is followed by several questions and discussion points to identify the learning objectives of the case (Group Discussion). Finally students

are assigned to report on the lessons learned from the case to the group (Group presentation).

Course Objectives: The study of immunology provides a rare opportunity in medicine to relate the findings of basic scientific investigation to clinical problems. The *overall objective* of the course is to supply the graduate students who are pursuing the Master's Degree in Biomedical Science and the Ph.D. in Integrative Biology programs with an up-to-date understanding of basic science of immunology and how that science applies to the realities of patient care.

By the end of the course in Problem-based Immunology, each student will be able to:

- Explain the immunodeficiency disorders in terms of whether they are inherited (primary) or acquired (secondary), and whether they affect the innate immune system or the adaptive immune system.
- Explain the immediate reactivity (type I) brought about by signaling following direct cross-linking of IgE on the cell surface to the more subtle reactions that follow the development of sustained T cell mediated immunity (type IV).
- Describe the most important characteristics of the mature immune system, the capacity for self vs. non-self discrimination.
- Describe the important role for the immune system in response to autologous tumors and explain major advances in our understanding of how to manipulate the immune system in patients with cancer.
- Explain the major problems associated with transplantation medicine and how we can manipulate the immune system to accept a foreign graft as self.
- Describe the current concepts in immunization and recognize our growing need to develop vaccines for the so-called emerging infectious diseases.
- Describe the genetic and environmental factors that govern changes in immune cells and tissues and recognize the salient features of abnormal immune cells.
- Demonstrate knowledge of the etiology, pathogenesis, diagnosis and therapy of diseases such as immunodeficiency disorders, autoimmunity, transplantation, cancer, and allergy.
- Interpret medical measures of health status in the context of clinical cases.
- Demonstrate an ability to utilize knowledge of immunology to solve clinically-based problems.
- Develop a vocabulary with which to communicate the knowledge of immunology to other professionals as well as the lay public.

Tentative Class Schedule:

Topic 1: Immunodeficiency Disorders

Jun 29: Introduction / Clinical Case 1 / Group Discussion / Group Assignment

Jul 01: Group presentation / Summary

Topic 2: Tumor Immunology

Jul 06: Introduction / Clinical Case 2 / Group Discussion / Group Assignment

Jul 08: Group presentation / Summary

Topic 3: Hypersensitivity

Jul 13: Introduction / Clinical Case 3 / Group Discussion / Group Assignment

Jul 15: Group presentation / Summary

Topic 4: Autoimmunity

Jul 20: Introduction / Clinical Case 4 / Group Discussion / Group Assignment

Jul 22: Group presentation / Summary

Topic 5: Transplantation

Jul 27: Introduction / Clinical Case 5 / Group Discussion / Group Assignment

Jul 29: Group presentation / Summary

Topic 6: Immunization

Aug 03: Introduction / Clinical Case 6 / Group Discussion / Summary

Aug 05: Exam

Course policies:

Lecture attendance is mandatory. Students are expected to be present at the start of each lecture. Missing classes will be detrimental to student's grade.

Any student who fails to show up on the exam date without prior notice and excuse will be given an F grade.

There will be no make up exam for the course. However, students missing exam for legitimate reasons should schedule a make up exam within 3 working days after the examination by contacting the course director.

Assessment procedures:

Quizzes will be given in class during group discussion sessions to allow students to interact with each other and demonstrate an ability to interpret and apply basic information to a clinical problem.

There will be one exam consisting of multiple choice questions (covering clinical cases) and short essays (covering major principles and concepts) on the date indicated below.

Attendance, fund of knowledge, group presentation and professionalism in the lecture will be used to decide final grades. The final grade will be determined according to the grade range A through F given below.

Grading criteria:

Points	Grade
91-100	A
88-90	A-
84-87	B+
80-83	B
75-79	C+
70-74	C
65-69	D
<65	F

Academic Honor Code:

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility.

The FAU Honor Code requires a faculty member, student, or staff member to notify an instructor when there is reason to believe an academic irregularity is occurring in a

course. The instructor must pursue any reasonable allegation, taking action where appropriate. The following constitute academic irregularities:

1. The use of notes, books or assistance from or to other students while taking an examination or working on other assignments, unless specifically authorized by the instructor, are defined as acts of cheating.
2. The presentation of words or ideas from any other source as one's own is an act defined as plagiarism.
3. Other activities that interfere with the educational mission of the University.

For full details of the FAU Honor Code, see University Regulation 4.001 at www.fau.edu/regulations/chapter4/4.001_Honor_Code.pdf.

Students With Disabilities

In compliance with the American Disabilities Act (ADA), students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) – in Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures.

Julie Sivigny

From: David Binninger [binninge@fau.edu]
Sent: Wednesday, March 17, 2010 11:47 AM
To: Julie Sivigny
Cc: Rodney Murphey
Subject: Fwd: Biomedical Science New Course Proposals

Good morning,

I circulated the syllabi for the new courses listed in your e-mail (see below) to the faculty who could make comments. I did not receive any responses that raised questions or noted a significant overlap with any of our graduate courses. Please let me know if you have any questions.

I hope this is helpful and good luck with the remainder of the process toward approval of the courses.

Regards,
David

David M. Binninger, Ph.D.
Associate Professor and Associate Chair
Department of Biological Science
and
Center for Molecular Biology and Biotechnology
Florida Atlantic University
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Boca Raton, FL 33431 USA
Phone: (561) 297-3323
FAX: (561) 297-2749

Begin forwarded message:

From: Julie Sivigny <jsivigny@fau.edu>
Date: March 15, 2010 1:38:27 PM EDT
To: 'David Binninger' <binninge@fau.edu>
Subject: **Biomedical Science New Course Proposals**

Dear Dr. Binninger,
Thank you for your assistance with this process. We are submitting a total of 10 new course proposals and 2 changes. All syllabi were forwarded to Dr. Murphey but in multiple batches so if you are missing any please let me know and I'll send to you immediately.

Biomedical Science New Course Proposals:
Host Defense & Inflammation – Dr. Yoshimi Shibata
Molecular Neuropsychopharmacology – Drs. Isgor and Tao
Macromolecules and Human Disease – Drs. Brew and Li
Adult Neurogenesis – Dr. Jianning Wei
Molecular Basis of Disease & Therapy – Dr. Caputi

Tumor Immunology – Dr. Vijaya Iragavarapu
Molecular Genetics of the Cell – Dr. Kantorow
Molecular Basis of Human Cancer – Dr. Lu
Problem-based Immunology – Dr. Nouri-Shirazi
Fundamentals of General Pathology – Dr. Levitt

The integrated morphology courses will be processed as changes. We previously offered two 3-credit courses: Human Gross Anatomy – Trunk and Human Gross Anatomy – Extremities. We are changing these to 4-credit courses with the titles *Integrated Morphology I and II* taught by Drs. Willis Paull, Rainald Shmidt-Kastner and Deborah Cunningham.

The graduate college submission deadline is Wednesday March 17th at noon. I apologize for the lateness of some of these requests and appreciate your effort to assist us.

Please let me know if I can provide any additional information.
Thank you.
Julie

Julie A. Sivigny
Academic Program Specialist
Charles E. Schmidt College of Biomedical Science
Florida Atlantic University
(561) 297-2216

From: David Binnering [<mailto:binnering@fau.edu>]
Sent: Monday, March 15, 2010 11:16 AM
To: Julie Sivigny
Cc: Rodney Murphey; Jay Lyons
Subject: Fwd: Biomedical Science New Course Proposal - Macromolecules & Human Disease

Good morning Julie,

I forwarded the syllabi for the new courses to the appropriate faculty last week. It's my opinion that there will not be any issues or conflicts. So far, I have had only one response and that was that there were no concerns. Please confirm the full list of new courses and when you need a statement from me.

I hope this is helpful and please let me know if you have any questions.

Regards,
David

David M. Binnering, Ph.D.
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Department of Biological Science
and
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