#### Submit original with signatures + 1 copy + electronic copy to UAF Governance.

See http://www.uaf.edu/uafgov/faculty/cd for a complete description of the rules governing curriculum & course changes.

## TRIAL COURSE OR NEW COURSE PROPOSAL

| SUBMITTED BY:   |   |                            |                  |                  |                        |           |            |                      |           |            |                  |
|---|---|----------------------------|------------------|------------------|------------------------|-----------|------------|----------------------|-----------|------------|------------------|
| Department  | GPMSL   |                            |                  |                  |                        | ge/School |            | SFOS                 |           |            |                  |
| Prepared by   | Ana M. Aguilar-Islas  |                            |                  |                  | Phone                  |           |            | 907 474 1524         |           |            |                  |
| Email<br>Contact  | amaguilarislas@alaska.edu<br>clneumann@alaska.edu                   |                            |                  |                  | <b>Faculty Contact</b> |           |            | Ana M. Aguilar-Islas |           |            |                  |
| 1. ACTION DES   | E):   | Trial Course               |                  |                  | X                      |           | New Course |                      |           |            |                  |
| 2. COURSE IDE   | NTIFICATION:  | Dept                       | ;                | MSI              | L                      | Course #  | <b>‡</b>   | 694                  | No. of    | Credits    | 3                |
| Justify upper/lower division status & number of credits:  This upper division/graduate level course is intended for students with a background in general chemistry and marine science. There will be 3 hours of lecture per week. Homework assignments, a synthesis paper (graduate level), and a presentation will be required. |   |                            |                  |                  |                        |           |            | Homework             |           |            |                  |
| 3. PROPOSED C   |   | Chemical Coastal Processes |                  |                  |                        |           |            |                      |           |            |                  |
| 4. To be CROSS YES/NO   |   | No                         |                  | ·                | , Dept:                |           |            | Cour                 |           |            |                  |
| (Requires appro   | val of both departme  | nts and deans i            |                  |                  |                        |           | or such    |                      |           |            | ı                |
| 5. To be STACKE<br>YES/NO   | E <b>D</b> ?  | Yes                        |                  | If yes,          | , Dept.                | MSL       |            | Cours                | e# 46     | 53         |                  |
| 6. FREQUENCY  | OF OFFERING:  | Alte                       | Alternate Spring |                  |                        |           |            |                      |           |            |                  |
|   |   | Fall, S                    | Spring, Su       | ımmer            | (Every,                |           | mbered     |                      | Odd-numl  | bered Year | s) — or As       |
| 7. SEMESTER & approved)   | YEAR OF FIRST   | OFFERING                   | G (if            |                  | S                      | pring 201 | 1          |                      |           |            |                  |
|   | rs may not be compre<br>lege or school's curri<br>nmittee.  MAT:    |                            |                  |                  |                        |           |            |                      |           | ks must be | approved by      |
| OTHER FORM  | AT (specify)  |                            |                  |                  |                        |           |            |                      |           |            |                  |
| Mode of delivery<br>field trips, labs, et   |   |                            |                  |                  |                        |           |            |                      |           |            |                  |
|   | OURS PER WEEK   |                            | h                | LECTU<br>nours/v | weeks                  | 2400      |            | s /week              |           | hour       | CTICUM<br>s/week |
| in non-science lab  | are based on contact<br>=1 credit. 2400-480<br>://www.uaf.edu/uafgo | 0 minutes of pr            | acticum=         | 1 credi          | t. 2400-               | 8000 minu | tes of in  | ternship=            | 1 credit. |            |                  |
| OTHER HOURS (specify type)  |   |                            |                  |                  |                        |           |            |                      |           |            |                  |

# 10. COMPLETE CATALOG DESCRIPTION including dept., number, title and credits (50 words or less, if possible):

### MSL S694Chemical Coastal Processes

#### 3 credits Offered Spring

A study of chemical processes in the coastal ocean. This course will examine chemical interactions at different boundaries, and explore physical and biological controls on the chemistry of coastal environments. Topics include: Photochemical processes; the role of suspended particles; coastal acidification; controls on coastal productivity; future challenges in coastal management. This course is intended for students with a background in general chemistry and marine science.

MSL 663/463

|  | f justification is needed, a   | attach on s  |  |   | pproved crite  S = Social S  |  | ige 10 &   | i / oi me i  | nanual.        |  |  |
|--|--|--|--|---|--|--|--|--|----------------|--|--|
|  | Will this course be use  | d to fulfil  | l a requireme  | nt  | 5 Social S   | YES  |  | NO   | X              |  |  |
|  | for the baccalaureate c<br>IF YES, check which co  |  | ments it coul  | d be used to fulfill:   |  |  |  |  |                |  |  |
|  | O = Oral Intensive, I  | Format 6   |  | W = Writing Intensiv  | ve, Format 7   | Na   | tural Scien  | ce, Format   | 8              |  |  |
|  | URSE REPEATABILIT s this course repeatable for   |  |  | YES   |  | NO X   |  |  |                |  |  |
|  | Justification: Indicate w (for example, the course   |  |  |   |  |  |  |  |                |  |  |
|  | How many times may the course be repeated for credit?  |  |  |   |  |  |  |  |                |  |  |
|  | If the course can be repe<br>may be earned for this co   | er of credit hour  | s that   | CF  | REDITS   |  |  |  |                |  |  |
|  |  |  |  |   |  |  |  |  |                |  |  |
|  | ADING SYSTEM: Spec   |  | ne.<br><mark>5/FAIL:</mark>  |   |  |  |  |  |                |  |  |
| RESTR  | CICTIONS ON ENROLL   |  |  |   |  |  |  |  |                |  |  |
| 14. PR   | EREQUISITES  | CHEM   | 106), The O  | uate Standing. Fo<br>ceans (MSL 111),   | or permissi  | on from instru   | ctor.  | CHEM 10  | )5 and         |  |  |
| D.F.   |  |  |  | ore the student is al   |  |  | ).   |  |                |  |  |
| KE   | ECOMMENDED Classes   |  |  | rongly encouraged   |  |  | rse.   |  |                |  |  |
| 15. SF   | PECIAL RESTRICTION   | S, COND  | ITIONS   | None  |  |  |  |  |                |  |  |
|  | ROPOSED COURSE FE  |  | \$0  |   |  |  |  |  |                |  |  |
| Has a  | memo been submitted the  |  |  |   |  |  |  |  |                |  |  |
| Yes/N  |  | rougn you  | r dean to the  | Provost & VCAS  | for fee appro  | val?   |  |  |                |  |  |
| Yes/N 17. PRI  | EVIOUS HISTORY   |  |  |   |  | val?   |  |  |                |  |  |
| Yes/N 17. PRI  | lo .   |  |  |   |  | val?   | No   |  |                |  |  |
| Yes/N 17. PRI  | lo<br>EVIOUS HISTORY<br>Has the course been offerd   | ed as spec   | ial topics or  |   |  | val?   | No   |  |                |  |  |
| Yes/N  17. PRI  19.  18. EST   | No EVIOUS HISTORY Has the course been offered Yes/No f yes, give semester, year, TIMATED IMPACT  | ed as spec   | ial topics or  | trial course previou  | usly?  |  |  |  |                |  |  |
| Yes/N  17. PRI  H  Y  18. EST  | No EVIOUS HISTORY Has the course been offered Yes/No If yes, give semester, year, IIMATED IMPACT WHAT IMPACT, IF ANY,  | ed as spec<br>, course #,<br>WILL TH   | ial topics or , etc.:  | trial course previou  | usly?<br>ITIES/SPAC  | E, FACULTY, 1  | ETC.   | veloning   | this           |  |  |
| Yes/N  17. PRI  19.  19.  18. EST  | No EVIOUS HISTORY Has the course been offered Yes/No f yes, give semester, year, TIMATED IMPACT  | ed as spec<br>, course #,<br>WILL TH<br>facilities   | ial topics or , etc.:  (IS HAVE ON) (Space, The  | trial course previous  BUDGET, FACIL  instructor, a re  | usly?<br>JTIES/SPAC  | E, FACULTY, I  | ETC.   | veloping   | this this      |  |  |
| Yes/N  17. PRI  18. EST  V  19. LIB  Ha  of                              | EVIOUS HISTORY Has the course been offered Yes/No  If yes, give semester, year, ITIMATED IMPACT WHAT IMPACT, IF ANY, No impact on budget,  | ed as spec<br>, course #,<br>WILL TH<br>facilities<br>er teachi<br>cary collect<br>s, equipme  | ial topics or  tetc.:  IS HAVE ON  Space. The ing workloa  | TBUDGET, FACIL<br>e instructor, a read (2-3 courses p   | usly?<br>UTIES/SPAC<br>cently hire<br>oer academ<br>en@alaska.e  | E, FACULTY, 1 od SFOS facul ic year).  | ETC.  Ity, is de   | rd to the a  | dequacy        |  |  |
| Yes/N  17. PRI  18. EST  V  19. LIB  Ha  of                              | EVIOUS HISTORY Has the course been offered Yes/No  If yes, give semester, year, IIMATED IMPACT WHAT IMPACT, IF ANY, No impact on budget, course to help fulfill h BRARY COLLECTIONS ave you contacted the libr library/media collections solution. If not, explain w   | ed as spec<br>, course #,<br>WILL TH<br>facilities<br>er teachi<br>cary collect<br>s, equipme  | ial topics or  etc.:  IS HAVE ON  syspace. The ing worklow  ction develope int, and service  Communicate reading ma  An updated  | TBUDGET, FACIL<br>e instructor, a read (2-3 courses p   | usly?  UTIES/SPAC  cently hire cer academ  en@alaska.e e proposed co  hristie (Bios the course ill be provid | edu, 474-6695) ourse? If so, gi  | ett.  Ity, is de  with regar  ve date of  y) determ  the lib | rd to the a f contact a nined the rary colle                       | dequacy<br>and |  |  |
| Yes/N  17. PRI  18. EST  V  19. LIB  Had  of res                         | EVIOUS HISTORY Has the course been offered Yes/No  If yes, give semester, year, WHAT IMPACT, IF ANY, No impact on budget, Yourse to help fulfill h BRARY COLLECTIONS INTO YOU CONTACTED INTO YES | will The facilities er teaching ary collective, equipment why not.   | ial topics or  etc.:  IS HAVE ON  syspace. The ing worklow  ction develope int, and service  Communicate reading ma  An updated  | TBUDGET, FACILE instructor, a read (2-3 courses per   | usly?  UTIES/SPAC  cently hire cer academ  en@alaska.e e proposed co  hristie (Bios the course ill be provid | edu, 474-6695) ourse? If so, gi  | ett.  Ity, is de  with regar  ve date of  y) determ  the lib | rd to the a f contact a nined the rary colle                       | dequacy<br>and |  |  |
| Yes/N  17. PRI  18. EST  V  19. LIB  Had  of res  20. IMI  W             | EVIOUS HISTORY Has the course been offered Yes/No  f yes, give semester, year, TIMATED IMPACT WHAT IMPACT, IF ANY, No impact on budget, course to help fulfill h BRARY COLLECTIONS tive you contacted the libralibrary/media collections solution. If not, explain w No Yes  PACTS ON PROGRAMS that programs/departma  | will TH facilities er teaching why not.  | ial topics or tetc.:  IS HAVE ON Space. The ing workloa tion developi nt, and service  Communica reading ma An updated material is a   | I BUDGET, FACIL  Le instructor, a read (2-3 courses particles available for the strict required for the list of readings wavailable to studently this proposed  | en@alaska.ee proposed cohristie (Biose the course ill be providents during the action?                       | edu, 474-6695) ourse? If so, gi  | ett.  Ity, is de  with regar  ve date of  y) determ  the lib | rd to the a f contact a nined the rary colle                       | dequacy<br>and |  |  |
| Yes/N  17. PRI  18. EST  19. LIB  Had  of s  res  20. IMI  Wind  Th      | EVIOUS HISTORY Has the course been offered tes/No  f yes, give semester, year, TIMATED IMPACT WHAT IMPACT, IF ANY, No impact on budget, course to help fulfill h BRARY COLLECTIONS twe you contacted the libralibrary/media collections foolution. If not, explain w No  PACTS ON PROGRAMS that programs/departmental information on the Profite proposed new course   | will have  | ial topics or  etc.:  (IS HAVE ON  syspace. The ing workloa  etion develope int, and service  Communica reading ma An updated material is a  be affected a artments conte a positive in            | trial course previous  BUDGET, FACIL  e instructor, a read (2-3 courses particle)  ment officer (kljens  ces available for the  ation with Anne Caterial required for  list of readings was available to studen  by this proposed  moted (e.g., email, mention attended (e.g., email, mention attended to the MSL | en@alaska.ee proposed cohristie (Biosofthe Course ill be providents during the action?                       | ed SFOS facultic year).  edu, 474-6695) yourse? If so, give ciences Libraris available from the class period   | with regard ve date of the libersure all                     | rd to the a<br>f contact a<br>nined the<br>rary colle<br>I reading | dequacy<br>and |  |  |
| Yes/N  17. PRI  18. EST  V  19. LIB  Had  of res  20. IMI  Winc  Th  off | EVIOUS HISTORY Has the course been offered tes/No  f yes, give semester, year, TIMATED IMPACT WHAT IMPACT, IF ANY, No impact on budget, course to help fulfill h BRARY COLLECTIONS twe you contacted the libralibrary/media collections solution. If not, explain w No Yes  PACTS ON PROGRAMS that programs/departmental and information on the Pro-   | will have as special a | ial topics or  etc.:  (IS HAVE ON  Space. The ing workloa  etion develope int, and service  Communica reading ma An updated material is a  be affected a artments conte a positive in rse in chemi | BUDGET, FACIL e instructor, a read (2-3 courses per   | en@alaska.ee proposed contistic (Biosofthe Course ill be providents during the action?                       | et, FACULTY, It of SFOS facultic year).  edu, 474-6695) yourse? If so, give sciences Libraris available from the class period wincreasing the finterest to Fis | with regard ve date of the libersure all                     | rd to the a<br>f contact a<br>nined the<br>rary colle<br>I reading | dequacy<br>and |  |  |

MSL 663/463 2

No negative impacts are expected from this course. The MSL program will be impacted positively by offering a course that focuses on the coastal ocean, as the course will promote a better understanding of chemical interactions in coastal waters, and will be useful for students whose research takes place in coastal environments.

#### JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

The coastal ocean is particularly vulnerable to environmental change. Understanding interactions among physical, chemical, and biological processes is necessary to predict and address the effects of ongoing environmental changes. Recent developments, including coastal acidification, eutrophication, and hypoxia in productive coastal regions highlight the need for understanding the chemical interactions involved. Currently the MSL program only offers one graduate course (MSL F626) that focuses on coastal/shelf processes, and it does so from a physical standpoint. Two chemistry-focused courses offered (MSL 660 and MSL 670) address the global ocean, touching only briefly on chemical coastal processes. The proposed course will provide students with a detailed study of chemical processes in the coastal ocean, adding depth and complementing information from the existing courses.

|   | Date                          |
|---|-------------------------------|
| Signature, Chair, Program/Department of:  | '                             |
|   | Date                          |
| Signature, Chair, College/School Curriculum Council for:  | Bute                          |
|   | D                             |
| Signature, Dean, College/School of:   | <b>Date</b>                   |
|   |                               |
|   | Date                          |
| Signature of Provost (if applicable) Offerings above the level of approved programs must be approve   | and in advance by the Ducycot |
|   |                               |
| DE STATISTICS MOST DE ODIMINED I RIOR TO GODMI  | SSION TO THE GOVERNANCE OFFIC |
| Signature, Chair, UAF Faculty Senate Curriculum Review Comm   | Date                          |
|   | Date                          |
| Signature, Chair, UAF Faculty Senate Curriculum Review Comm   | Date cacking)                 |
| Signature, Chair, UAF Faculty Senate Curriculum Review Comm   | Date                          |
| Signature, Chair, UAF Faculty Senate Curriculum Review Comm  DDITIONAL SIGNATURES: (As needed for cross-listing and/or sta  | Date  Cacking)  Date          |
| Signature, Chair, UAF Faculty Senate Curriculum Review Comm  DDITIONAL SIGNATURES: (As needed for cross-listing and/or statement)  Signature, Chair, Program/Department of: | Date cacking)                 |
| Signature, Chair, UAF Faculty Senate Curriculum Review Comm  DDITIONAL SIGNATURES: (As needed for cross-listing and/or sta  | Date  Cacking)  Date          |
| Signature, Chair, UAF Faculty Senate Curriculum Review Comm  DDITIONAL SIGNATURES: (As needed for cross-listing and/or statement)  Signature, Chair, Program/Department of: | Date  Cacking)  Date          |

MSL 663/463 3

#### ATTACH COMPLETE SYLLABUS (as part of this application).

Note: The guidelines are online: http://www.uaf.edu/uafgov/faculty/cd/syllabus.html

The department and campus wide curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course change will be <u>denied</u>.

#### SYLLABUS CHECKLIST FOR ALL UAF COURSES

During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

| 8   |  |
|---|--|
| 1. Course information:  |  |
| $\Box$ Title, $\Box$ number, $\Box$ credits, $\Box$ prerequisites, $\Box$ location, $\Box$ meeting time (make sure that contact hours are in line with credits).  |  |
| 2. Instructor (and if applicable, Teaching Assistant) information:  |  |
| $\square$ Name, $\square$ office location, $\square$ office hours, $\square$ telephone, $\square$ email address.  |  |
| 3. Course readings/materials:   |  |
| $\square$ Course textbook title, $\square$ author, $\square$ edition/publisher.   |  |
| $\square$ Supplementary readings (indicate whether $\square$ required or $\square$ recommended) and   |  |
| $\square$ any supplies required.  |  |
| 4. Course description:  |  |
| $\Box$ Content of the course and how it fits into the broader curriculum;   |  |
| ☐ Expected proficiencies required to undertake the course, if applicable.   |  |
| $\square$ Inclusion of catalog description is <i>strongly</i> recommended, and  |  |
| ☐ Description in syllabus must be consistent with catalog course description.   |  |
| 5. ☐ Course Goals (general), and (see #6)   |  |
| 6. ☐ Student Learning Outcomes (more specific)  |  |
| 7. Instructional methods:   |  |
| ☐ Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).   |  |
| 8. Course calendar:   |  |
| ☐ A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester. |  |
| 9. Course policies:   |  |
| ☐ Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.  |  |
| 10. Evaluation:   |  |
| $\square$ Specify how students will be evaluated, $\square$ what factors will be included, $\square$ their relative value, and  |  |
| $\Box$ how they will be tabulated into grades (on a curve, absolute scores, etc.)   |  |
| 11. Support Services:   |  |
| $\square$ Describe the student support services such as tutoring (local and/or regional) appropriate for the course.  |  |
| 12. Disabilities Services:  |  |
| The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials.   |  |
| ☐ State that you will work with the Office of Disabilities Services (208 WHIT, 474-5655) to provide reasonable  |  |

MSL 663/463 4

accommodation to students with disabilities."