**DSA 5900 PROFESSIONAL PRACTICE**

**Catalog Description:**

This course focuses on real-world application of the skills taught in DSA core courses. This course allows a student to earn credit toward the degree requirements by completing an intense practicum experience. (Fall, Spring, Summer)

**Credit Hours:** 1-4 hours, may be repeated not to exceed 4 total hours

**Textbook:** None required

**Staff Coordinator:** DSA Staff

**Faculty Coordinator:** Faculty member (Faculty Coordinator) approved by the DSA Graduate Liaison

**Office Hours:** TBD and/or by appointment

**Prerequisites:** Completed or concurrent enrollment in DSA 5103, DSA 5113, DSA 4413, DSA 5005 and DSA 4513. Graduate standing and approval from the Faculty Coordinator.

**Eligibility:**

The student must first identify a practicum sponsor and secure a practicum topic. The student should present this to the DSA office to determine if this practicum meets the requirements for credit. To meet the requirements, the set of activities that the student expects to complete during the practicum must contain high-level Data Science and Analytics work, such that the sum of the experiences for the practicum is equivalent to what a student would learn in an equivalently credited, graduate-level course. In addition, the practicum sponsor overseeing the practicum must agree in writing to prepare two evaluations/progress reports over the course of the experience. The reports can be in the form of an email or letter.

The student must complete a proposal prior to starting the practicum, but after consultation with the faculty coordinator and the practicum sponsor. The proposal should identify the practicum sponsor, the duration of practicum, and the deliverables as agreed upon by the practicum sponsor and the faculty coordinator.

**Course Description:**

As a part of the course requirements, the student must complete:

i. **Written Proposal:** The proposal must be submitted to the DSA office a minimum of two weeks prior to beginning the practicum. It must be typewritten and include the following sections:

   a. Introduction. This should include how many credit hours the practicum is for. If it is a paid internship, un-paid internship or research project. Who will be supervising the work, include name, contact and title. The supervisor is also required to submit two progress reports to the DSA office.
b. Objectives. This objectives section should state the technical project objectives, as well as the student’s individual learning objectives.

c. Plan. The plan section should provide a discussion of the specific project(s) that the student will work on and identify the student’s responsibilities for each project. Include what skills from the DSA core courses they intend to apply to the project.

d. Deliverables. The deliverables or outcomes of the plan should be described here.

e. Schedule. A timetable for completion of the practicum projects should be provided here.

ii. **Written Report:** This report will typically be 15-25 pages long and must be typewritten. The typewritten report must contain the same sections as the proposal, but with updated and expanded information as appropriate:

   a. Introduction.
   
   b. Objectives. Did the objectives change from the original, or need to change during the practicum.
   
   c. Plan. Were any changes made to the plan, if so why.
   
   d. Deliverables. How did these vary from the proposal.
   
   e. Schedule. Were you able to follow the planned schedule, if not why.

   The report must also contain an additional two sections:

   f. Results. Explain your results and how they were achieved, or if not why and what would you change. What DSA skills were applied.
   
   g. Self Assessment. Describe your accomplishments and rate how you feel you did.

   The written report must be submitted and presented to the faculty coordinator for review, no later than two weeks prior to the presentation date. A copy must be submitted to the DSA office at the same time.

iii. **Oral Presentation:** A computer-based oral presentation will be given by the student highlighting the Objectives, Deliverables, Schedule, Result and Self Assessment described in the written report. This presentation should be 10 minutes for 1-hour practicum taken by thesis students, and 20 minutes for 4-hour practicum taken by non-thesis students.

**Grading:**

This course is graded on a Satisfactory/Unsatisfactory (S/U) basis. To earn a grade of “S”, all the criteria in the following table must be met satisfactorily. One copy of the final report should be given to the Faculty Coordinator.

<table>
<thead>
<tr>
<th>Assessment items</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal</td>
<td>Proposal is grammatically correct, includes all required sections, and clearly identifies practicum</td>
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</tbody>
</table>
work tasks and relevance to the degree curriculum.

<table>
<thead>
<tr>
<th>Supervisor’s Report</th>
<th>Lists dates worked, describes project(s) and student’s responsibilities, and evaluates student’s performance.</th>
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<tbody>
<tr>
<td>Technical Performance</td>
<td>Project(s) is/are completed as assigned using good data science and analytical principles.</td>
</tr>
<tr>
<td>Written Report</td>
<td>Report is well organized, clearly written, contains no typographical or grammatical errors, and includes all required sections.</td>
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<tr>
<td>Oral Presentation</td>
<td>Presentation is delivered professionally and student responds to committee’s questions effectively.</td>
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**Academic Integrity:**

Any form of ethical misconduct, both academic and professional, will not be tolerated. Students are responsible for knowing the requirements of the Academic Misconduct Code and the Engineering Code of Ethics.

**Reasonable Accommodation Policy:**

Any student in this course who has a disability that may prevent him/her from fully demonstrating his/her abilities should contact the Faculty Coordinator as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

**Students are responsible for any changes/additions to this syllabus announced in class.**