



# **Course Syllabus**

## **Project Management**

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**August – December 2026**

**Term IX**

**Professor**

**Choy Pun, Augusto Carlos**

## I. General Course Information

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| <b>Subject:</b>        | Project Management                                                                                               |                            |                                      |
| <b>Pre-requisite:</b>  | Planeación Estratégica, y Diseño y Evaluación de Proyectos (Strategic Planning and Project Design and Appraisal) | <b>Code:</b>               | 04720                                |
| <b>Precedent:</b>      | None                                                                                                             | <b>Semestre:</b>           | 2026-2                               |
| <b>Credits:</b>        | 3                                                                                                                | <b>Term:</b>               | IX                                   |
| <b>Weekly Hours:</b>   | 3                                                                                                                | <b>Course type:</b>        | In presence                          |
| <b>Type Program(s)</b> | Mandatory<br>Information Technology and Systems<br>Industrial and Commercial Engineering                         | <b>Course Coordinator:</b> | Joseph Ballón<br>jballon@esan.edu.pe |

## II. Summary

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This course provides students with the base knowledge of Project Management processes, through the initial, planning, execution, follow-up, control, and closing cycles. Promotes management skills build-up via project development in multidisciplinary teams.

## III. Course Objectives

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The objective of the course is to design a Project Management Plan related to a Capstone Project, applying concepts, tools, and techniques based on best practices accepted worldwide.

## IV. Learning Results

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At the end of the course, students will be able:

- To know important concepts about Project Management, focus on the Knowledge Management Areas proposed by The Project Management Book of Knowledge - PMBOK 6th edition.
- To apply concepts and tools for effective management of projects.
- To design a Project Charter, Stakeholder Analysis, Requirements, and WBS linked to Capstone Project.
- To design a Schedule, Budget, and Quality Metrics linked to Capstone Project.
- To know the importance of Soft Skills in Project Management.
- To design a RACI Matrix, Communication Matrix, and Procurement Matrix linked to Capstone Project.
- To Perform a Qualitative Risk Analysis linked to Capstone Project.
- To develop a sense of accountability for the final Capstone Project results.

- The ability to design solutions to complex engineering problems and design systems, components, or processes to meet desired needs within realistic public health and safety, cultural, social, economic, and environmental constraints.
- The ability to perform effectively as an individual, as a member, or leader of diverse teams.
- The ability to identify, formulate, search for information, and analyze complex engineering problems to reach informed conclusions using basic principles of mathematics, natural science, and engineering science.
- The ability to communicate effectively, by understanding and writing reports and design documentation, making presentations, and transmitting and receiving clear instructions.
- The ability to create, select and use modern engineering and information technology techniques, skills, resources, and tools, including prediction and modeling, with an understanding of their limitations.

## **V. Methodology**

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The methodology is based on the active participation of students, using methods and techniques acquired in class.

There will be sessions explained by the professor with lectures and discussions in groups, case studies, reading papers, practice exercises, and an integrator assignment.

There are mandatory readings from complementary material and these should be completed by students according to the course schedule.

### **Learning Teams Activities**

During the regular sessions, students will work in pairs or small informal groups to analyze cases or issues that we will discuss during the session. Student participation is expected and included as part of PEP grade.

In the second week, the class will set up formal Learning Teams of 3 to 5 students; these Learning Teams will complete and present a Case Study before the Mid-Term Exam. If a student experiences difficulty working with his/her team, he/she should resolve those issues with his/her teammates, but if, however, that is not possible, please raise those issues with your teacher.

ESAN students work effectively in diverse groups and teams to achieve tasks and goals. They collaborate and function well in team settings performing leader as well as follower roles. They should respect diversity and behave in a tolerant fashion toward colleagues.

## VI. Evaluation

The evaluation system is comprehensive and continuous to promote learning in the student. The final grade is composed of Continuous Evaluation (PEP) (70%), and Final exam (30%).

The Average Permanent Evaluation is calculated based on the student's learning process follow-up: Reading Controls/ Quizzes / Cases/ Presentations / Research Work / Class Contribution. The weighted average of these marks results in the corresponding score.:

| AVERAGE PERMANENT EVALUATION 70% |                                                                                                                                                                          |          |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Type of evaluation               | Description                                                                                                                                                              | Weight % |
| Class contribution               | Involvement in discussions                                                                                                                                               | 15       |
| Attendance                       | Attending class                                                                                                                                                          | 5        |
| Reading Controls (RC)            | Four RC quizzes (5% each)                                                                                                                                                | 20       |
| Practical Quizzes                | Three PCs, eliminates the lowest (5% each)                                                                                                                               | 10       |
| Capstone Project                 | During the semester the students will develop a Project Management Plan and develop workshops about the topics performed in class, Two Team Deliverables (25 marks each) | 50       |

Final Grade (PF) is calculated using the following formula:

$$PF = (0,70 \times PEP) + (0,30 \times EF)$$

Where:

- PF** = Final Grade  
**PEP** = Continuous Evaluation  
**EF** = Final Exam

## VII. Programmed Content

| WEEK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CONTENTS                                                                                                                                                                                                                                                                                                      | ACTIVITIES / EVALUATION                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Learning Unit 1: Project Management Body of Knowledge – Part 01</b><br><b>Learning Results:</b> <ul style="list-style-type: none"> <li>To know important concepts about Project Management, focus on Integration and Scope Management, proposed by the Project Management Book of Knowledge - PMBOK 6<sup>th</sup> edition.</li> <li>To apply concepts and tools for effective management of projects.</li> <li>To design a Project Charter, Stakeholder Analysis, Requirements, and WBS linked to the Capstone Project.</li> <li>The ability to design solutions to complex engineering problems and design systems, components, or processes to meet desired needs within realistic public health and safety, cultural, social, economic, and environmental constraints.</li> <li>The ability to perform effectively as an individual, as a member or leader of diverse teams.</li> </ul> |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                     |
| <b>1°</b><br><br>August 17 - 22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Topics:</b><br>1.1 Introduction and Integration Management.<br>- Project Management introduction.<br>PMBOK and its sections.<br>- PMBOK 6 ed – Chapters 1 to 3<br>- AXELOS (2017) – Chapters 1 & 2                                                                                                         | Presentation: Course Methodology<br>Guidelines review for the development of the final Capstone Project.<br>APA standards <ul style="list-style-type: none"> <li>Lecture.</li> <li>Define teams</li> </ul>                          |
| <b>2°</b><br><br>August 24 – 29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Topics:</b><br>2.1 Integration Management.<br>- Project Charter.<br>- Project Management Plan.<br>- Integration Management Process.<br>- Project Canvas<br>2.2 Value Creation.<br>Team Working<br>- PMBOK 6 ed – Chapters 4<br>- PMBOK 7 ed - Standard – Chapters 2<br>- AXELOS (2017) – Chapters 3        | <ul style="list-style-type: none"> <li>Lecture.</li> <li>Workshop N° 01 (Project Canvas)</li> </ul> <b>Assign RC 1 week 3</b>                                                                                                       |
| <b>3°</b><br><br>August 31 – September 05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Topics:</b><br>3.1 Stakeholders Management<br>- Learning about Stakeholders' techniques<br>- Review Stakeholders Management Processes<br>Managing stakeholders<br>3.2 Stakeholders Performance Domain<br>- PMBOK 6 ed – Chapter 13<br>- PMBOK 7 ed – A Guide – Section 2.1<br>- AXELOS (2017) – Chapters 7 | <ul style="list-style-type: none"> <li>Lecture</li> <li>Workshop N° 02 (Stakeholder Analysis)</li> <li>Post Capstone Project</li> <li>Reading Control N° 01</li> </ul> Schedule of visits for Capstone<br><b>Assign RC 2 week 5</b> |

| WEEK                                                                                                                                                                                                                                                                                                                                                                                                                                                            | CONTENTS                                                                                                                                                                                            | ACTIVITIES / EVALUATION                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4°<br><br>September 07 - 12                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Topics:</b><br>4.1 Scope Management.<br>- Scope Project and Scope Product.<br>- Scope Management Process.<br>Work Breakdown Structure as<br>Fundamental Tool<br>4.2 Development Approach         | <ul style="list-style-type: none"><li>• Lecture</li><li>• Workshop N° 03 (Requirements and WBS)</li><li>• Integrated Presentation</li></ul> <b>Assign</b> Capstone deliverable 1 Week 7                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | - PMBOK 6 ed – Chapter 5<br>- PMBOK 7 ed – A Guide – Section 2.3<br>- AXELOS (2017) – Chapters 4 & 5                                                                                                |                                                                                                                                                                                                                                                                             |
| <b>Learning Unit 2: Project Management Body of Knowledge – Part 02</b><br><b>Learning Results:</b> <ul style="list-style-type: none"><li>• To design a Schedule, Budget and Quality Metrics linked to Capstone Project.</li><li>• The ability to identify, formulate, search for information, and analyze complex engineering problems to reach informed conclusions using basic principles of mathematics, natural science, and engineering science.</li></ul> |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                             |
| 5°<br><br>September 14 - 19                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Topics:</b><br>5.1 Time Management.<br>- Time Management Processes.<br>- Estimation Techniques of Time.<br>Critical Path Method and Techniques of<br>Compression.<br>5.2 Team Performance Domain | <ul style="list-style-type: none"><li>• Lecture.</li><li>• Presentation – Capstone Project Management</li><li>• MS Project lab exercise - Time in Project Management</li><li>• Exercises – Critical Path.</li><li>• Reading Control N° 02</li></ul> Integrated Presentation |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | - PMBOK 6 ed – Chapter 6<br>- PMBOK 7 ed – A Guide – Section 2.2<br>- AXELOS (2017) – Chapters 6                                                                                                    |                                                                                                                                                                                                                                                                             |
| 6°<br><br>September 21 –26                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Topics:</b><br>6.1 Cost Management.<br>- Cost Management Processes.<br>- Estimation Techniques of Cost.<br>Earned Value Method.                                                                  | <ul style="list-style-type: none"><li>• Lecture.</li><li>• Exercises - Earned Value.</li><li>• Workshop N° 04 (Schedule and Budget)</li><li>• MS Project lab exercise – Cost in Project Management</li></ul>                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | - PMBOK 6 ed – Chapter 7<br>- PMBOK 7 ed – A Guide - Section 2.5.5<br>- AXELOS (2017) – Chapters 9 & 11                                                                                             |                                                                                                                                                                                                                                                                             |
| 7°<br><br>September 28 –<br>October 03                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Topics:</b><br>7.1 Quality Management.<br>- Quality Management Processes.<br>The Seven Fundamental Quality Tools.                                                                                | <ul style="list-style-type: none"><li>• Lecture.</li><li>• Workshop N° 05 (Quality Metrics)</li><li>• Integrated Presentation</li></ul> <b>Assign</b> RC 3 week 9<br><b>Capstone 1</b> Deliverable and Presentation due                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | - PMBOK 6 ed – Chapter 8<br>- PMBOK 7 ed – A Guide - Section 2.6.3<br>- AXELOS (2017) – Chapters 8                                                                                                  |                                                                                                                                                                                                                                                                             |
| 8°<br><br>October 05 - 10                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>PROJECT 1<sup>st</sup> Presentation</b>                                                                                                                                                          |                                                                                                                                                                                                                                                                             |

| WEEK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ACTIVITIES / EVALUATION                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Learning Unit 3: Project Management Body of Knowledge – Part 03 and Soft Skills.</b><br><b>Learning Results:</b> <ul style="list-style-type: none"> <li>To know the importance of Soft Skills in Project Management</li> <li>To design a RACI Matrix, Communication Matrix and Procurement Matrix linked to Capstone Project.</li> <li>To Perform a Qualitative Risk Analysis linked to Capstone Project.</li> </ul> The ability to create, select and use modern engineering and information technology techniques, skills, resources and tools, including prediction and modeling, with an understanding of their limitations. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                |
| <b>9°</b><br><br>October 12 - 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Topics:</b><br>9.1 Resources Management.<br>- Resources Management Processes<br>Teambuilding.<br>- PMBOK 6 ed – Chapter 9<br>- PMBOK 7 ed – A Guide – Section 2.5.5<br>- AXELOS (2017) – Chapters 13 - 14                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>Lecture.</li> <li>Reading Control N° 03</li> <li>Workshop N° 06 (Organization Chart and RACI Matrix)</li> <li>Post Special Assignment for week 13</li> </ul>                            |
| <b>10°</b><br><br>October 19 - 24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Topics:</b><br>10.1 Communication Management.<br>- Communication Management Processes.<br>- Communication Matrix and Lessons Learned.<br>10.2 Soft Skills in Project Management.<br>- The importance of Soft Skills for a Project Manager.<br>- Communication and Motivation.<br>- Leadership as fundamental skill.<br>Negotiation and Solution of Conflicts<br>- PMBOK 6 ed – Chapter 10<br>- PMBOK 7 ed – A Guide – Section 2.5.4<br>- AXELOS (2017) – Chapters 15 - 17 | <ul style="list-style-type: none"> <li>Lecture.</li> <li>Workshop N° 07 (Communications Matrix)</li> <li>Integrated Presentation<br/> <b>Assign</b> RC 4 week 11 and Capstone Advance 02 Final Presentation Week 15</li> </ul> |
| <b>11°</b><br><br>October 26 – October 31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Topics:</b><br>11.1 Procurement Management.<br>- Procure Management Processes.<br>Procure Matrix and Management of Suppliers<br>- PMBOK 6 ed – Chapter 12<br>- AXELOS (2017) – Chapters 12 - 14                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Lecture.</li> <li>Reading Control N° 04</li> <li>Workshop N° 08 (Procurement Matrix)</li> </ul>                                                                                         |
| <b>12°</b><br><br>November 02 - 07                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Topics:</b><br>12.1 Risk Management.<br>- Risk Management Processes.<br>Risk Matrix and Risk Break Down Structure<br>- PMBOK 6 ed – Chapter 11<br>- PMBOK 7 ed – A Guide – Section 2.5.7<br>- AXELOS (2017) – Chapters 10 & 15                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Lecture.</li> <li>Workshop N° 09 (Risk Matrix)</li> <li>Integrated Presentation</li> <li>Assign RC 5 week 14</li> </ul>                                                                 |

| WEEK                                                                                                                                                                                                                                                                                                                                                                                        | CONTENTS                                                                     | ACTIVITIES / EVALUATION                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Learning Unit 4: Project Management Body of Knowledge – Part 04.</b><br><b>Learning Results:</b> <ul style="list-style-type: none"> <li>To learn about Agile Methodologies – Scrum Framework.</li> </ul> The ability to communicate effectively, by understanding and writing reports and design documentation, making presentations, and transmitting and receiving clear instructions. |                                                                              |                                                                                                                                              |
| <b>13°</b><br><br>November 09 - 14                                                                                                                                                                                                                                                                                                                                                          | <b>Topics:</b><br>13.1 Presentation – Project Management Special Assignment. | <ul style="list-style-type: none"> <li>Presentation – Project Management - Special Assignment.</li> </ul>                                    |
|                                                                                                                                                                                                                                                                                                                                                                                             | - AXELOS (2017) – Chapters 16 & 20                                           |                                                                                                                                              |
| <b>14°</b><br><br>November 16 - 21                                                                                                                                                                                                                                                                                                                                                          | <b>Topic:</b><br>Final Presentation - Integrated Project Management Plan     | <ul style="list-style-type: none"> <li>Presentation – Definitive Guide to SCRUM</li> <li>Reading Control N° 05</li> </ul>                    |
|                                                                                                                                                                                                                                                                                                                                                                                             | The Scrum Guide, The Definitive Guide to Scrum                               |                                                                                                                                              |
| <b>15°</b><br><br>November 23 -28                                                                                                                                                                                                                                                                                                                                                           | <b>Topic:</b><br>Framework - Scrum                                           | <ul style="list-style-type: none"> <li>Final Presentation – Kick Off Meeting.</li> <li>Presentation – Capstone Project Management</li> </ul> |
| <b>16°</b><br><br>November 30 - December 05                                                                                                                                                                                                                                                                                                                                                 | <b>FINAL EXAMS</b>                                                           |                                                                                                                                              |

## VIII. Bibliography

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### Mandatory Bibliography

- Project Management Institute - PMI. (2021). *Project Management Body of Knowledge*. (7<sup>th</sup> ed). Pennsylvania: PA, USA. Book Editor – PMI Publications.
- Project Management Institute - PMI. (2017). *Project Management Body of Knowledge*. (6<sup>th</sup> ed). Pennsylvania: PA, USA. Book Editor – PMI Publications.
- AXELOS, The Stationery Office (editor) (2018)- *Managing Successful Projects with PRINCE2 2017 Edition*-TSO
- Project Management Institute - PMI. (2009). *Practice Standard for Project Risk Management*. Pennsylvania: PA, USA. Book Editor – PMI Publications.
- Project Management Institute - PMI. (2006). *Practice Standard for Work Breakdown Structures*. (2<sup>nd</sup> ed). Pennsylvania: PA, USA. Book Editor – PMI Publications.
- Project Management Institute - PMI. (2001). *People in Projects*. Pennsylvania: PA, USA. Book Editor – PMI Publications.
- Schwaber, K & Sutherland J. (2017). *The Scrum Guide*. Retrieved from [www.scrumguides.org](http://www.scrumguides.org)

### Recommended Bibliography

- Dr. James W. Marion, Dr. Tracey Richardson (2022)- *Managing Projects With PMBOK 7\_ Connecting New Principles With Old Standards*-Business Expert Press (2022)
- Academy, Skill Valley - PMI PMP PMBOK 7 Practice Exam Book\_ Over 3 Full Practice Tests, offering 540+ realistic PMP questions aligned with PMBOK Guide, 7th Edition and 2021 ECO with detailed explanations (2023)
- David G. Carmichael (2022)- *Risk and Systems\_ With Applications in Infrastructure Project Management*-CRC Press
- Christian Smart (2021)- *Solving for Project Risk Management*-McGraw-Hill Education
- Project Management Institute (2020)- *The Standard for Earned Value Management*-Project Management Institute
- Project Management Institute - *The Standard for Risk Management in Portfolios, Programs, and Projects*-Project Management Institute (2019)
- Project Management Institute - *Practice Standard for Work Breakdown Structures*-Project Management Institute (2019)
- Moritz Knueppel - *The Scrum Guide Explained A Comprehensive Analysis of the Scrum Guide* (2020)
- Josh Wright - *Scrum\_ The Complete Guide to the Agile Project Management Framework that Helps the Software Development Lean Team to Efficiently Structure and Simplify the Work & Solve Problems in Half*
- IT Governance (editor) - *The PRINCE2 Agile® Practical Implementation Guide – Step-by-step Advice for Every Project Type*-It Governance Publishing (2021)
- (Essential Short Guides) Robin Catling - *The Essential Short Guide to PRINCE2®\_ Introducing PProjects IN Controlled Environments*-Proactivity Press (2021)
- David-Hinde-*PRINCE2-Study-Guide\_-2017-Update-Orgtopia*-(2021)
- Fred Heath - *The Professional Scrum Master (PSM I) Guide\_ Successfully practice Scrum in real-world projects and achieve PSM I certification with confidence*-Packt Publishing (2021)
- Kezner, H. (2013). *Project Management a systems approach to planning, scheduling and controlling* (11<sup>th</sup> ed). New Jersey: NJ, USA. John Wiley & Sons Inc.
- Brown, J. (2008). *The Handbook of Program Management. How to facilitate project success with optimal program management*. New York, NY: McGraw Hill.
- Levatec, C. (2006). *The Program Management Office – Establishing, Managing and Growing the Value of a PMO*. Florida: FL, USA. J. Ross Publishing Inc.
- Project Management Institute Portal. Retrieved from [www.pmi.org](http://www.pmi.org).

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## **Research Ethics:**

PLEASE NOTE: Internet searches will often take you to non-academic information resources. You may supplement your research with these sources, but keep in mind that the information you find there may not be accurate since it does not come under a formal oversight or peer-review process.

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While you may use and cite non-academic resources such as Wikipedia when working on assignments, you may not rely on them exclusively. The majority of your sources should be peer-reviewed academic journals. Further, remember that you are responsible for the accuracy of any facts you present in your assignments and therefore should confirm the veracity of information you find on non-academic sources through further research.

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## **IX. Professors**

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