# Important Exam Information:

| Exam Date and Time      | A read-through time will be given prior to the start of the exam–15 minutes in the morning session and 15 minutes in the afternoon session.                       |
|-------------------------|---|
| Exam Registration       | Candidates may register online or with an application.  |
| Study Note Order Form   | Study notes are part of the required syllabus and are not available electronically.   |
| Introductory Study Note | The Introductory Study Note has a complete listing of all study notes<br>as well as errata and other important information.                                       |
| Case Study - 09.03.10   | This case study will also be provided with the examination.<br>Candidates will not be allowed to bring their copy of the case study<br>into the examination room. |
| Past Exams              | Past Exams from 2000-present are available on SOA web site.   |
| <u>Updates</u>          | Candidates should be sure to check the Updates page on the exam<br>home page periodically for additional corrections or notices.                                  |

#### Syllabus for Group and Health Design and Pricing Exam:

The candidate should be very familiar with the Learning Objectives as described in the syllabus. These Learning Objectives are the first ingredient in developing the syllabus and also guide the examination committee when writing questions. The Learning Objectives set out the cognitive level needed to pass this exam. You will notice that the candidates are expected to "analyze," "explain," "calculate," "describe," "apply," etc. While studying the syllabus material, candidates may want to refer back to the Learning Objectives to remain focused on the goals of the exam.

| Exa | Exam Group/Health Design & Pricing  |                     |
|-----|---|---------------------|
| Lea | Learning Objective  |                     |
| 1.  | <ol> <li>Understand and evaluate the effectiveness of the various types of Single Employer group coverage typically offered         <ul> <li>Group health plan, including Consumer driven plans, etc.</li> <li>Prescription Drug</li> <li>Group dental plan</li> <li>STD or LTD plan (incl. mention of coverage within other plans)</li> <li>Group life plan</li> <li>Other miscellaneous benefits</li> <li>Multi-employer groups (Taft-Hartley, etc)</li> </ul> </li> </ol>  | under:              |
| Lea | Learning Outcomes   |                     |
| The | <ul> <li>The candidate will be able to: <ul> <li>a) Describe the various coverages, including typical benefit provisions, eligibility requirements, cost-sharing providuding mechanisms</li> <li>b) Identify the potential gaps in needed or desired coverages</li> <li>c) Identify which participants would find each coverage a valued benefit and why</li> <li>d) Assess the advantages and disadvantages to an sponsor of offering a given coverage/benefit</li> <li>e) Evaluate potential financial, legal and moral risks associated with each coverage</li> <li>f) Recommend policy provisions to minimize the risks identified above</li> <li>g) Assess the advantages and disadvantages to an participant of offering a given coverage/benefit</li> <li>h) Evaluates several coverage scenarios as alternatives to a given scenario</li> </ul> </li> </ul> | visions, limits and |
| Syl | Syllabus Resources  |                     |
| •   | • The Handbook of Employee Benefits, Rosenbloom, Sixth Edition, 2005  |                     |
|     | o Ch. 6, Understanding Managed Care Health Plans: The Managed Care Spectrum   |                     |
|     | • Ch. 11, Alternative Prescription Drug Plans and Their Impact on Employers   |                     |
|     | o Ch. 12, Understanding Managed Behavioral Health Care Benefits   |                     |
|     | o Ch. 46, Preventive Health Care Strategies: An Overview for Employers  |                     |
| •   | Group Insurance, Bluhm, Fifth Edition, 2007   |                     |
|     | o Ch. 8, Dental Benefits  |                     |
|     | o Ch. 11, Miscellaneous Benefits  |                     |
| •   | Canadian Handbook of Flexible Benefits, Third Edition, McKay, 2007  |                     |
|     | • Ch. 6, Death and Disability   |                     |
| •   |   |                     |
| •   |   |                     |
| •   | • GH-D102-07 Group Life Insurance Introduction, Sections 1–3  |                     |
| ٠   | • GH-D103-07 Pricing Long Term Care, <b>pp. 1-9</b>   |                     |
| •   | GH-D106-07 EBRI Fundamentals of Employee Benefit Programs   |                     |
|     | • Ch. 14, Multi-Employer Plans  |                     |
| •   | <ul> <li>2009 Annual Meeting, Session 51, Value-Based Insurance Design<br/><u>http://www.soa.org/files/pdf/2009-boston-chernew-51.pdf</u></li> </ul>  |                     |

| Exam   | m G   | roup/Health Design & Pricing   |
|--------|---|--|
| Learn  | rning Objective   |  |
| 2.     | Understand and evaluate the effectiveness of the various types of Indivi<br>- Individual health plan<br>- LTC (including group and individual)<br>- Individual DI plan<br>- Medicare Supplement                             | dual and multi-life coverage typically offered under:                  |
| Learn  | rning Outcomes  |  |
| The ca | candidate will be able to:  |  |
|        | a) Describe the various coverages, including typical qualifications for   | r benefits, coverage eligibility, cost-sharing provisions, limits, and |
|        | funding mechanisms  |  |
|        | b) Identify the potential gaps in needed or desired coverages   |  |
|        | c) Identifies which insureds would find each coverage a valued bene   |  |
|        | d) Evaluate potential financial, legal and moral risks associated with  |  |
|        | e) Recommend policy provisions to minimize the risks identified abo   |  |
|        | f) Evaluates several coverage scenarios as alternatives to a given see  | nario  |
| Sylla  | abus Resources  |  |
|        | Individual Health Insurance , Bluhm, 2007 - (including any CD ROM n<br>o Ch. 2, The Products  | eferences)   |
| •      | GH-D104-07 Pricing Medicare Supplement Benefits, Sections I & II  |  |
| •      | GH-D105-07 Direct Marketing   |  |
| •      | Critical Issues in Health Reform: Market Reform Principles http://www   | .actuary.org/pdf/health/market_reform_may09.pdf                        |
|        | Health Reform in the 21 <sup>st</sup> Century, proposals to Reform the health Systent <a href="http://www.actuary.org/pdf/health/health_systems_june09.pdf">http://www.actuary.org/pdf/health/health_systems_june09.pdf</a> | em, AAA  |
|        |   |  |

| Exan                 | 1   | Group/Health Design & Pricing  |
|----------------------|---|--|
| Learr                | ing Objectives  |  |
| 3.                   | <ul> <li>Evaluates employer strategies for designing and funding benefit pl</li> <li>i) Active employees</li> <li>ii) Dependents</li> <li>iii) Pre-65 retirees</li> <li>iv) Post-65 retirees</li> <li>v) Disabled (short and long-term)</li> </ul>  | ans for:   |
| Learn                | ing Outcomes  |  |
| a)<br>b)<br>c)<br>d) | andidate will be able to:<br>Describe typical strategies used by employers to fund and design to<br>Evaluate potential financial, legal, moral risks associated with each<br>Recommend benefit, eligibility, or funding provisions to minimize<br>Evaluate integration strategies with government programs (e.g., Pa<br>Describe opportunities to encourage employees to be more health   | h strategy<br>e each of the risks identified above<br>arts A,B, and D of Medicare) |
| Sylla                | bus Resources   |  |
| •                    | Canadian Handbook of Flexible Benefits, McKay, Third Edition,<br>Ch. 2, Elements of Flex Plans<br>Ch. 3, Starting and Maintaining a Flexible Program<br>Ch. 7, Flexible Expense Accounts – Health Spending, Person<br>Ch. 23, Case Studies  |  |
| •                    | <ul> <li>The Handbook of Employee Benefits, Rosenbloom, Sixth Edition,</li> <li>Ch. 1, The Environment of Employee Benefit Plans</li> <li>Ch. 2, Functional Approach to Designing &amp; Evaluating Emp</li> <li>Ch.3, Risk Concepts and Employee Benefit Planning</li> <li>Ch.7, Understanding Managed Care Health Plans: Understar</li> <li>Fundamentals of Retiree Group Benefits, Yamamoto, 2006</li> <li>Ch. 1, Introduction</li> <li>Ch. 2, Erosion of Retiree Health Benefits</li> <li>Ch. 4, Retiree Benefit Design</li> <li>Ch. 5, Funding</li> </ul> | loyee Benefits   |

| Exam    |   | Group/Health Design & Pricing   |
|---------|---|---|
| Learni  | ng Objective  |   |
|         | valuate the various types of coverages typically offered under a geo<br>ocial Security Disability Income, states' Temporary Disability Inc  | overnment health plan (e.g., Medicare, Medicaid, Canadian health plan,<br>ome programs, Workers Compensation, etc.) |
| Learnii | ng Outcomes   |   |
| The ca  | <ul> <li>ndidate will be able to:</li> <li>Describe the various coverages, including typical qualificatio<br/>taxation and funding mechanisms</li> </ul>  | ns for benefits, coverage eligibility, cost-sharing provisions, limits,   |
| b<br>c  | ) Identify the potential gaps in needed or desired coverages  | e   |
| Syllab  | us Resources  |   |
| • 6     |   |   |
| • 7     | the Handbook of Employee Benefits, Rosenbloom, Sixth Edition, 2   | 005   |
| 0       | Ch. 22, Social Security and Medicare ( pp. 529-549 and 559-   | 565 only (Social Security))   |
| 0       | Ch. 12, Government Old-Age, Survivors, and Disability Plans<br>Ch. 13, Government Health Care Plans in the U.S. ( <b>Medicaid</b><br><i>Jundamentals of Retiree Group Benefits</i> , Yamamoto, 2006 |   |
| • U     | Update on Massachusetts Health Care Financing Review, Health W<br>ttp://www.soa.org/library/newsletters/health-watch-newsletter/200   |   |

| Exa  | m Group/Health Design & Pricing  |
|------|--|
| Lea  | rning Objective  |
| 5.   | Apply U.S. and Canadian nation-specific regulation to product design and pricing   |
| Lea  | rning Outcomes   |
| The  | candidate will be able to:   |
|      | a) Determine if given policy provision is compliant with the regulation  |
|      | b) Describe key provisions of major legislation  |
|      | <ul> <li>c) Evaluate the potential financial and moral risk associated with the legislation</li> <li>d) Determine the potential impact on the cost of complying with the regulation</li> </ul> |
|      | d) Determine the potential impact on the cost of comprying with the regulation   |
| Syll | labus Resources  |
| •    | Group Insurance, Bluhm, Fifth Edition, 2007  |
|      | o Ch. 21, Small Group Rate Filings and Certifications  |
| •    | Individual Health Insurance, Bluhm, 2007 (including any CD ROM references)   |
|      | • Ch. 1, Introduction  |
|      | • Ch. 3, Policy Forms  |
|      | o Ch. 9, Regulation  |
| •    | GH-D101-07 Group Disability Insurance (section 5 only)   |
| •    | GH-D104-07 Pricing Medicare Supplement Benefits, Section III   |
| •    | GH-D108-07 EBRI Issue Brief 273 – Health Savings Accounts and Other Account- Based Products  |

| Exam        |  | Group/Health Design & Pricing |
|-------------|--|-------------------------------|
| Learning    | g Objective  |                               |
| 6. Ap       | pply U.S. and Canadian taxation rules to employer and individual   | health plan                   |
|             |  |                               |
| Learning    | g Outcomes   |                               |
| The can     | ndidate will be able to:   |                               |
| a)          |  | nployer and employee          |
| b)          |  |                               |
| c)          | Assess pricing impact of taxation on employer, employee or p   | olicy holder                  |
|             |  |                               |
| Syllabu     | is Resources   |                               |
|             |  |                               |
| • Ca        | anadian Handbook of Flexible Benefits, McKay, Third Edition, 2   | 007                           |
| • Ca<br>o   | anadian Handbook of Flexible Benefits, McKay, Third Edition, 2<br>Ch. 12, Taxation of Flexible Benefits  | 007                           |
|             |  | 007                           |
| 0<br>0      | Ch. 12, Taxation of Flexible Benefits  |                               |
| 0<br>0      | Ch. 12, Taxation of Flexible Benefits<br>Ch. 13, Discrimination Issues   |                               |
| • <i>Th</i> | Ch. 12, Taxation of Flexible Benefits<br>Ch. 13, Discrimination Issues<br><i>he Handbook of Employee Benefits</i> , Rosenbloom, Sixth Edition, 2 |                               |

| Exam  | Group/Health Design & Pricing                                 |
|---|---|
| Learning Objective  |   |
| 7. Understand predictive modeling techniques  |   |
| Learning Outcomes   |   |
| <ul> <li>The candidate will be able to:</li> <li>a) Describe how predictive modeling techniques are used in und</li> <li>b) Describe typical predictive modeling techniques</li> <li>c) Evaluate the advantages and disadvantages of each technique</li> </ul>  |   |
| Syllabus Resources  |   |
| • GH-D110-07 An Introduction to Predictive Modeling for Disease   | Risk Stratification   |
| GH-D111-07 Predictive Modeling and Finding and Intervening with the second | th the High-Cost Healthcare Consumer, Haelan Group Whitepaper |
| Assessing Predictive Modeling Tools for Pricing and Underwriting <u>http://www.soa.org/library/newsletters/health-watch-newsletter/20</u>   |   |
| <ul> <li>Predictive Modeling Applications, RSA 31, #2, session 3PD<br/><u>http://www.soa.org/library/proceedings/record-of-the-society-of-actions</u></li> </ul>  | ctuaries/2000-09/2005/june/rsa05v31n23pd.pdf                  |

 Predictive Modeling: Considerations for Care Management Applications, *Health Section News*, 4/2004, <u>http://www.soa.org/library/newsletters/health-section-news/2004/april/HSN0404.pdf</u>

| lxa | m Group/Health Design & Pricing  |
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| ear | ning Objectives  |
|     | Evaluate the process and be able to develop a medical manual rate for both ASO and insured business  |
| ear | ning Outcomes  |
|     | candidate will be able to:   |
|     | a) Identify and evaluate sources of data needed for pricing and underwriting including the quality, appropriateness, and limitations of  |
|     | <ul><li>each data source</li><li>b) Identify and evaluate the rating parameters needed to evaluate and manage a book-of-business</li></ul>   |
|     | <ul> <li>c) Develop experience analysis (claims cost and expenses)</li> </ul>  |
|     | i) Construct the appropriate models  |
|     | <ul><li>ii) Develop the appropriate assumption, including trend, anti-selection, etc.</li><li>d) Recommend appropriate actions following the study including</li></ul>                                 |
|     | i) Areas for further study   |
|     | ii) Changes in coverage, eligibility requirements or funding strategy  |
|     | <ul> <li>e) Evaluate the impact of changing economic conditions on pricing</li> <li>f) Evaluate provider compensation model, including capitation, and its impact on projected claim costs.</li> </ul> |
|     | g) Integrate utilization management data into pricing  |
|     | h) Modify manual rates to reflect specific plan values including benefits for which little or no data is available   |
|     | i) Construct a rating model to be used for rating individual customers or plan designs   |
| yll | abus Resources   |
|     | Group Insurance, Bluhm, Fifth Edition, 2007  |
|     | • Ch. 29, Estimating Claim Costs for Life Benefits   |
|     | <ul> <li>Ch. 30, Estimating Medical Claim Costs</li> </ul>   |
|     | <ul> <li>Ch. 31, Estimating Claim Costs for Disability Benefits</li> </ul>   |
|     | <ul> <li>Ch. 32, Estimating Dental Claim Costs</li> </ul>  |
|     | o Ch. 34, Calculating Gross Premiums   |
|     | <ul> <li>Ch. 36 Medical Claim Cost Trend Analysis</li> </ul>   |
|     | • Ch. 38 Applied Statistics  |
|     | o Ch. 39, Data Sources and Structures  |
|     | <ul> <li>Ch.46, Management of Provider Networks</li> </ul>   |
|     | Individual Health Insurance, Bluhm, 2007 (including any CD ROM references)   |
|     | • Ch. 5, Setting Premium Rates   |
|     | • Ch. 8, Forecasting and Modeling  |
|     | Managing and Evaluating Healthcare Intervention Programs, Duncan, 2008   |
|     | • Ch. 9, Understanding Patient Risk and Its Impact on Chronic and Non-Chronic Member Trends  |
|     | • Ch. 11, Comparative Analysis of Chronic and non-Chronic Insured Commercial Member Cost Trends  |
|     | • Ch. 15, The Relationship Between Risk Factors and Health Care Claims Costs in Program Design and Evaluation  |
|     | GH-D101-07 Group Disability Insurance (sections 2, 4 and 7 only)   |
|     | GH-D102-07 Group Life Insurance, Section 6   |
|     | GH-D103-07 Pricing Long-Term Care <b>pp.9–34</b>   |
|     | GH-D104-07 Pricing Medicare Supplement Benefits, Sections IV & V   |
|     | GH-D107-07 Actuarial Aspects of Taft-Hartley Welfare Plans, Reserves, Claim Forecasts, and Setting Contribution Levels   |
|     | GH-D112-07 Monitoring and Projecting Pricing Trends in a Managed Care Environment  |
|     | GH-D113-07 Group Long Term Disability – Improving Actuarial Analysis through Understanding the Benefits Process  |
| ,   | GH-D114-07 Actuarial Issues in Fee-For-Service/Prepaid Medical Group, Sutton & Sorbo   |
|     | Timing's Everything: The Impact of Benefit Rush, Health Watch, May 2008<br>http://www.soa.org/library/newsletters/health-watch-newsletter/2008/may/hsn-2008-iss58.pdf                                  |
| ,   | Emerging Data on Consumer Driven Healthcare AAA Task Force Report on CDH (May 2009)  |
|     | http://www.actuary.org/pdf/health/cdhp_may09.pdf   |

- 2008 Annual Meeting, Session 123, Technological Solutions to Pricing Health Coverage http://www.soa.org/files/pdf/2008-orlando-annual-123.pdf
- 2008 Annual Meeting, Session 129, Are Your Health Trends Fact or Fiction? <u>http://www.soa.org/files/pdf/2008-orlando-annual-129.pdf</u>
- 2009 Health Meeting, Session 57, The Actuary and Provider Contracting: Mastering the Process <u>http://www.soa.org/files/pdf/2009-toronto-health-lueders-57.pdf</u>
- 2009 Health Meeting, Session 81, Pricing Issues
   <u>http://www.soa.org/files/pdf/2009-toronto-health-lupica-81.pdf</u>
- 2009 Health Meeting, Session 39, Medicare Supplement Update <u>http://www.soa.org/files/pdf/2009-toronto-health-miller-39.pdf</u>
- 2009 Health Meeting, Session 37, Disability Experience in the US and Canada <u>http://www.soa.org/files/pdf/2009-toronto-health-garand-37.pdf</u>
- 2009 Health Meeting, Session 64, LTC and Disability Insurance: Learning from the Past <u>http://www.soa.org/files/pdf/2009-toronto-health-helwig-64.pdf</u>
- 2009 Health Meeting, Session 13, Value-Based Purchasing http://www.soa.org/files/pdf/2009-toronto-health-hom-13.pdf

| Exam Group/Health Design & Pricing |  |  |
|------------------------------------|--|--|
| Lear                               | ning Objectives  |  |
| 9.                                 | Applies principles of pricing, benefit design and funding to an underwriting situation   |  |
| Lear                               | ning Outcomes  |  |
|                                    | candidate will be able to:   |  |
| a)                                 | Understand the risks and opportunities associated with a given coverage, eligibility requirement or funding mechanism  |  |
| b)                                 | Evaluates the criteria for classifying risks   |  |
| c)                                 | Recommends strategies for minimizing or properly pricing for risks   |  |
| d)                                 | Describe basic approaches to credibility theory  |  |
| e)                                 | Apply the credibility theory to a given underwriting situation   |  |
| Syll                               | abus Resources   |  |
| •                                  | Canadian Handbook of Flexible Benefits, McKay, Third Edition, 2007   |  |
|                                    | o Ch. 14, Pricing  |  |
|                                    | o Ch. 16, Adverse Selection  |  |
| •                                  | Group Insurance, Bluhm, Fifth Edition, 2007  |  |
|                                    | • Ch. 24, Underwriting Large Groups  |  |
|                                    | <ul> <li>Ch. 25, Underwriting Small Groups</li> <li>Ch. 35, Experience Rating and Funding Methods</li> </ul>   |  |
|                                    | o Ch. 42, Underwriting Gain and Loss Cycles  |  |
|                                    | • Ch. 44, Product Development  |  |
| •                                  | Individual Health Insurance, Bluhm, 2007 (including any CD ROM references) <ul> <li>Ch. 4, Managing Anti-Selection</li> </ul>  |  |
|                                    | <ul> <li>Ch. 4, Managing Anti-Selection</li> <li>Ch. 11, Managing the Business, pp. 311-319 and 322-334</li> </ul>   |  |
| •                                  | GH-D101-07 Group Disability Insurance (section 6 only)   |  |
| •                                  | GH-D102-07 Group Life Insurance Sections 5 & 7   |  |
| •                                  | GH-D104-07 Pricing Medicare Supplement Benefits, Section VI  |  |
| •                                  | GH-D109-07 Medical Underwriting: Approaches and Regulatory Restrictions (Shreve-Milliman Research Report)  |  |
| •                                  | GH-D117-07– Variation by Duration in Small Group Medical Insurance Claims  |  |
| •                                  | Optimal Small Group Renewal Methods, <i>Health Section News</i> , 8/2005, pg 12-15,23<br>http://www.soa.org/library/newsletters/health-section-news/2005/august/hsn0508.pdf  |  |
| •                                  | Cumulative Anti-Selection Theory, TSA XXXIV<br>http://www.soa.org/library/research/transactions-of-society-of-actuaries/1982/january/tsa82v3411.pdf  |  |
| •                                  | 2009 Annual Meeting, Session 82, Modeling Anti-Selection and Optimal Pricing of Individual Medical and Small Group Insurance <a href="http://www.soa.org/files/pdf/2009-boston-oconnor-82.pdf">http://www.soa.org/files/pdf/2009-boston-oconnor-82.pdf</a>         |  |
| •                                  | The Reverend Thomas Bayes and Credibility Theory, <i>Contingencies, Jan/Feb 2008</i><br>http://www.contingencies.org/janfeb08/workshop.pdf   |  |
| •                                  | ASOP 25, Credibility Procedures Applicable to Accident and Health, Group Term Life and Property/Casualty Coverages <a href="http://www.actuarialstandardsboard.org/pdf/asops/asop025_051.pdf">http://www.actuarialstandardsboard.org/pdf/asops/asop025_051.pdf</a> |  |
| •                                  | Show Me the Utility: Practical Applications of Credibility, RSA Vol.28, #2<br>http://new.soa.org/library/proceedings/record-of-the-society-of-actuaries/2000-09/2002/january/rsa02v28n242pd.pdf  |  |